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UNIVERSITY OF ALBERTA

CHILDREN'S DRAWING PROCESSES: INTERPRETING THEIR MEANING

BY

MARGARET BROOKS

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of MASTER OF EDUCATION.

DEPARTMENT OF ELEMENTARY EDUCATION

Edmonton, Alberta
Fall, 1995

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ABSTRACT

Traditionally, teachers have regarded drawing as art. More recently it has been viewed as emergent writing. Art and writing are both avenues of communication. For young children, who are not yet able to read and write, drawing is one of their primary languages. Young children draw to express personal perceptions, thoughts and feelings. Drawing is a representation of the world as seen through their eyes. This process of representation helps them make sense of what they see. Our understanding of their representation draws us closer to their vision of the world. The communication through drawing is personal and intimate. The messages sent are not always urgent or practical, sometimes they are subtle or hidden, but they all demand a response. How do we as adults respond to this communication and these messages? How can we better support their efforts? Can drawing with children help us understand the children in our care more clearly? These are some of the questions that form the foundation of my study. This study explores how we as teachers encourage and respond to the messages our students express through their drawing.

My perspective on children's drawing processes has been influenced by many life experiences. By using extracts from autobiographical studies of my development as an artist and a teacher, and from my teaching journals, I have tried to bring readers into my line of vision to better see what it is I am studying. References to the educational theories and research that have guided and influenced my work with young children are woven throughout.

This study closely examines the drawing processes of the children in my class of four and five year olds. I have interpreted the meaning children's drawings hold for them, what the children's intentions were when drawing, how they evaluate their work and how drawing helped them make sense of their world. I have examined the pedagogical relationship within the drawing context and tried to make more explicit how we, as adults, teachers and artists, can best support the drawing efforts of young children.

'When attempting to understand the life worlds of young children,

I as an adult, am confronted with the task of reconstructing narratives that are drawn from a language of action, of gesture, of activity, of silence - a living text that forms the fabric of a story which I must weave for an adult audience.' ... 'To become the story teller of childhood is to "fuse horizons" with the culture of childhood, to seek meaning that inheres in the experience of the participants is also to invest the experience with meaning so that understanding becomes, an event, a movement of history itself in which neither interpreter or text can be thought of as autonomous parts.' (Gadamer 1976) My writing attempts to draw the reader as close to the drawing lives of young children as possible so the world as the child might represent it will be more easily seen.

This study has tried to bridge the gap between language and visual representations and 'fuse the horizons' by using photographs, video clips and art samples to highlight and bring into view the process of drawing. As van Manen(1990) points out, 'It is important for human science to recognize that novels, paintings, music, and cinematography may be reflected upon phenomenologically, and thus imported into phenomenological writing.' I have videotaped and photographed children drawing in the many contexts that naturally occur within my teaching. My own interactions with the children were captured by a student who held the video camera, and by parents and students who took photographs. By responding to a visual process with other visual mediums I have attempted to captured the essence of the visual process.

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Introduction to the Study

Traditionally, teachers have regarded drawing as art. More recently it has been viewed as emergent writing. While both art and writing are avenues of communication, I wonder how we as teachers encourage and respond to the messages our students express through their drawing?

Drawing is a form of communication. The communication is personal and intimate. The messages sent through children's drawings are not always urgent or practical, sometimes they are subtle or hidden, but they all demand a response. Drawing is one of the many languages of young children. For those who are not yet able to read and write it is one of their primary languages. Children draw to express personal perceptions, thoughts and feelings. Drawing is a representation of the world as seen through their eyes. This process of represention helps them make sense of what they see. Our understanding of children's representation draws us closer to their vision of the world. How do we as adults respond to this communication and these messages? How can we better support their efforts? Can drawing with children help us understand the children in our care more clearly? These are some of the questions that form the foundation of my study.

My perspective on children's drawing processes has been influenced by many life experiences. Drawing has always been an integral part of my own life. I cannot remember a time when I did not draw. As a child, drawing was my refuge and release, as an adolescent it was my focus, my way of knowing and my life line, as an adult it creates new perspectives and gives balance to my life. As a teacher, drawing is an integral part of my curriculum. There has always been a place and time to draw in my classroom. As a mother, each of my children were supported in their efforts to draw from the moment they could first hold a pencil. I have spent a lifetime drawing and watching my students and my children draw. By using extracts from autobiographical studies of my development as an artist and a teacher, and from my teaching journals, I hope to bring readers into my line of vision to better see what

it is I am studying.

References to the educational theories and research that have guided and influenced my work with young children are woven throughout the study. This introduction, combined with chapter one, will give the reader an indication of my perspective for the main body of my research which follows. I have used an italic font in chapter one to indicate that the extract is taken from another autobiographical study. Chapter two describes the pedagogical relationship within the drawing contexts of my classroom. In this chapter I have tried to describe the drawing process as a lived experience. Chapter three examines in more detail some of the learning experiences of children through drawing. Chapter four explores the relationship between writing and drawing and returns finally to the perspective of the artist in the child. In each chapter I adopt a different point of view for looking at children drawing in the hope that the combined perspectives will yield a fuller picture. Chapter five summarizes my conclusions and makes recommendations for further reseach.

Chapter 1

ORIENTING TO CHILDREN DRAWING

Extracts from my autobiographical study on becoming an artist

Early art experiences.

The summer before I started school I remember weekends in the big empty one room school of my Grandmother. Light filtering dimly through the high windows that obscured the world, creating ghosts out of chalk dust. The desks empty and the books and equipment stacked neatly away on the shelves, it was a hollow and barren place without the children. I was drawn to the one oasis in the room; low tables pushed together and covered with oilskins to create a large working space. It was on this surface that my grandmother lovingly displayed the treasures of her garden and the surrounding woods and fields. Armfuls of flowers, pocketfuls of rocks, bunches of grasses, collections of snail shells, seeds, feathers and owl pellets were thoughtfully arranged to invite children into my grandmother's love of nature. Around these displays were metal trays with round blocks of tempera paint, a fat clay pot held an interesting assortment of brushes, a jug was filled with water ready to pour into smaller jars for use with the paints. It was here, at the age of four, that I had the first art experiences I can remember. It was a comfortable place to do art. I had the whole table to myself. I could choose from several sizes and qualities of paper and brushes, I could choose what it was I painted and I had all weekend to lose myself in the colors and the movement of the brushes. Occasionally my grandmother would leave the paperwork at her desk and show me a new technique but mostly I worked alone. That no one stood critically over me or jostled next to me was a relief. That I was seen as both competent and responsible enough to use this equipment was a powerful, and empowering experience for me. It was in this schoolroom that I first became aware of a sense of myself as a special person; one that was able to make responsible decisions for myself and fulfill difficult tasks independently.

This incident must have taken place in the mid 1950's in Scotland.

My grandmother had an eclectic approach to teaching. I know she was greatly influenced by the teachings of Montessori. This might explain the setting out of authentic materials and the arrangement of the supplies so the child can, with training, use them responsibly. To have devoted so much space to an art table and to have put so much thought into the set up she must have believed in the value of art. However my grandmother was a mathematician and never drew or painted herself. This was an era when a largely romantic view of childhood still prevailed. Froebel's notion of kindergarten, the children's garden, where the belief was that one just needed to provide the right environment for the children and they would grow and learn according to their own inherent nature.

Victor Lowenfeld was an influential figure in the field of art education at that time. He believed that individual self expression in art was essential for healthy emotional and personal development. (Lowenfeld, 1947) His was very much a 'hands off' approach; adults should not interfere in the child's process of art making.

My grandmother was progressive for her time. I am told she was experimenting with an exploratory model of teaching, one that likely suited her multi-aged one room school. This is a style of teaching still often found in 'play based' and 'discovery-learning' classrooms. It is an approach to teaching that views the teacher's role as negotiating an activity with children and providing a stimulating environment, but taking quite a back seat role while the children provide their own interpretation for their work and find their own solutions to problems. This approach is intended to be a radical alternative to didactic teaching because it aims to empower the learner with greater autonomy. However it too has limitations. It may actually have an opposite effect through its permissiveness and shield the learner from the challenge of social interactions, different ways of thinking and critical awareness.

These approaches to education and art might explain why, in my memories of learning how to do art, the adult support and instruction is either missing, or consists of tentative technical instruction in the background of my own unmediated explorations.

I do not remember my grandmother talking to me about my art or painting herself. It is only the setting that I remember. My grandmother remains a distant figure, sitting at her desk on the far side of the room absorbed in her own work. I sensed she did not want interruptions. I was in another part of the room dabbling away in my own self discovery. I enjoyed the process. I felt independent and confident, but I had no sense of myself as an artist. There was no dialogue with anyone engaged in the same process. I had no guidance or feedback from the adult. A pedagogical relationship was largely missing.

Although my memory paints warm and reassuring images for me, much of the detail has faded and been lost. I am able to visualize the table I worked at, but I don't remember the specifics. What did I choose to draw? How did I make that choice? Was it the color or the shape of a particular flower that attracted me? Were my drawings good? Did they get better over time? Did my family acknowledge my efforts? How did they respond to what I had done? All I am left with is a rather hazy memory of a fairly positive experience around flowers and paint, in an otherwise hostile building, and in the background my grandmother working.

Many of the missing pieces in my memory pictures are probably lost in time but I can't help feeling that my experience of the art making process is very similar to many of the experiences I have observed of children engaged in art in the schools where I have visited and worked, through my teaching career. It is a picture that has not changed much over time. We still very much believe that adults have little to no place in the art making processes of young children. I wonder how many children who begin school drawing fluently and using drawing as one of their primary languages are gradually silenced in this medium, through the absence of meaningful dialogue.

Unfortunately when I began school neither my school nor my art experiences were so positive or rich. My teacher was a middle aged spinster who had been the school cook before the war. She had been pressed into teaching during the war and had remained. She knew little about children or teaching. The lessons I learned in the two years I spent in her class were sad. I learned that Janet

was the cleverest girl in the class, but being the cleverest meant that most of your peers ostracized you. I learned that adults could deeply humiliate children and there was nothing they could do about it. I learned to take my mind somewhere else while my body sat with it's feet together on the floor and my hands clasped on the desk top. I learned that I was not clever, but I could win approval for the best handwriting. There were no art opportunities for me to show my strengths and without them I felt invisible and empty.

I include this small extract because it provides a contrast to the following one. In my relationship with this first teacher I have no sense of her being aware of me or attempting to relate to me in any way, whereas my relationship in the next extract is rich and supportive. Both have had long-lasting effects on me.

Half way through my second year at school the county hired an art teacher whose job it was to go around the rural schools and teach art. His name was Bill Moffat. I lived for the one afternoon a week we spent in his class. He opened up a whole new world for me. Each week he took over the domestic science room, the tables were covered with plastic and together we explored all kinds of mediums I had never heard of before; pastels, charcoal, collage and clay. In the summer he would take us all outside to the village and the fields around and we would sketch and draw the things we saw. In the winter we worked together to create huge and fantastic murals which lit up the halls of the school and formed the backdrops and scenery for Christmas plays.
He noticed that I had a special talent and gave me extra encouragement. Being good at art was something that was socially acceptable among my peers, and I did not experience the cruel teasing Janet endured. He told my father about art exhibitions in Edinburgh that I might enjoy, and discussed them if I went to see them. He lent me huge books of famous paintings. He had my father bring me to his studio above his house to see the paintings he was working on. He would explain to me what he had been trying to achieve in his painting, and invite discussion. He firmly established my love for art, and a comforting assurance of my own abilities.

The process of becoming an artist is largely hidden from view.

There are records of artists' products, over periods of time and these have been analyzed for themes and development. There are a few biographies of artists' lives. Both try to illuminate the personality and life of the artist and talk very little about the metacognition that might give us insight into the actual process of making art. What has often been missing or lost however, is the voice of the artist. Rarely, in everyday life, do we have the opportunity to watch an artist at work, or to enter into a dialogue with an artist about their work. This is unfortunate as it perpetuates an aura of mystique and denies access to those who are not part of the culture.

My visits to Bill Moffat's studio and his explanations of what he was trying to do, were powerful experiences for me. I was surprised that he, the expert in my eyes, would have problems he was working through. I was amazed at the number of sketches and abandoned attempts lying around. I had believed that it was because I was a child, a novice, that my pictures would not work out the way I wanted. I had thought that his ideas for his pictures came purely from within him, but as he showed me illustrations of other artists' work that had influenced him, I began to see that his work contained ideas and elements that were borrowed.

I took it for granted, not having other models for comparison, that he should see me as an artist in the making, however it was probably a very unusual stance. A more usual response to a child drawing might rather be to consider them locked within a developmental framework such as that proposed by Luquet (1927) and later by Piaget (1956). Within this framework it would be pointless to introduce children to a concept for which they are not ready.

When engaged in art activities with Bill Moffat the experience was more like apprenticeship. It was much like the description by Rogoff where, building upon the work of Vygotsky, she explores the metaphor of apprenticeship. She, "sees learning as occurring through the participation of a 'novice' in a jointly undertaken cultural activity, in which the 'expert' assists the novice's performance and, through demonstration, guidance, and explanation, enables her to appropriate and internalize the cultural ways of carrying out the activity"(cited in

Wells, G. 1993).

When we went sketching with Bill Moffat, he would bring his own sketch book and work along side us, modeling what it looked like to sketch. In the preparation of the large murals, he would lead a group discussion as to subject, who would paint which piece and what the overall finished work would look. He would work with us and I remember standing, watching in awe, as he freshened an over-worked section, or brought to life an animal or figure with a few deft strokes.

I have no way of discovering if Bill Moffat's style of teaching came from any particular theory or if his methods were merely a response to the needs of the children with whom he worked. What I am left with, is a sense of a practicing artist, so enthusiastic about his profession, he could not help but draw in and inspire those who worked with him.

I remember the relationship he developed with me, more than I remember what or where we painted. It is the first memory I have of a pedagogical relationship with a teacher. My definition of a pedagogical relationship is taken from Max van Manen; "those types of actions and interactions intentionally (though not always deliberately or consciously) engaged in by an adult and a child, directed towards the child's positive being and becoming" (1991). For Bill Moffat, I truly felt, his intent was aimed at 'strengthening as much as possible any positive intentions and qualities of the child' (1991).

I believe that before I can become part of the picture making process with children, I have to establish a relationship of trust, openness and support; a pedagogical relationship with the children. The nature of a pedagogical relationship is discussed in great detail in, '*The Tact of Teaching*', by Max van Manen and I often use his writing to guide my interactions with young children.

Extracts from my autobiographical study on becoming a teacher

My son's early art experiences

Rory was being bullied and teased. I knew because he would run up our drive from the school bus ahead of us, muddy and disheveled, and lock himself

in his room for over an hour saying he just wanted to be alone. Sometimes I could hear him quietly sobbing on his bed. When I tried to talk to him he refused to open up and threatened never to go to school again if I talked to the school about it. His brother told me that they were both being teased because they were new to the school and spoke with strong English accents and wore different clothes. A group of older boys had been pushing Rory around at recess.

As new immigrants to Canada our whole family was struggling to deal with many changes in our lives. I did not know how best to help Rory in a new school, in a new country. Having just started my own studies at university, to meet Alberta's teaching requirements, I was struggling to survive myself.

To make matters worse for Rory, he was put in a class that matched his chronological age, but he was doing work he had already mastered. His teacher was kind and listened to me patiently and politely. She could not understand how a grade one child could be doing grade five math and grade three language arts nor could she understand how his previous teachers could have taught him. She tried very hard to accommodate to Rory's needs and gave him extra, more challenging work to do once he had finished the regular class work. One of the exercises was an independent report on topics or books that interested him. These reports had to include an illustrated title page and one or two pages of writing. Rory seemed to enjoy doing the reports, but he struggled with the title pages. One struggle I remember was his beaver report. After several frustrated efforts of trying to create a beaver gnawing down a tree he gave up in tears. I offered to draw it for him, but he refused, on the grounds that his teacher would know it was my drawing not his. I found him some pictures of beavers so that he would know better what they looked like. The more he drew the more frustrated he grew with his efforts. The child who had previously produced many free and spontaneous drawings was now doubting his ability. His box of wax crayons just would not produce the details he wanted. I suggested that he just use a pencil or pencil crayons but he insisted that he had to use wax crayons because that was what everyone else used to draw. He didn't want to be different. By the end of the evening he had convinced himself he could not draw and would never be able to draw. Many scenes occurred like this where he steadfastly refused to allow me to help him or participate in his drawing while he crumpled page after page of frustrated efforts.

The classroom experience of being given extra work, compounded Rory's

social difficulty of feeling different. The extra homework allowed him no time to play or relax and he was becoming more anxious and frustrated. We decided to thank the teacher for trying to help and we gave up the efforts of doing extra work at home. Rory went back to marking time at school.

I suffered for him as a mother, I suffered through the agonies of my own unhappy school experiences that I had desperately wanted to spare him, but perhaps most of all I suffered for him as a fellow artist. Drawing was such an important and integral part of my life I found it heartbreaking that one of my children should be denied the power of making sense of his world through drawing and that I, the one closest to him, should be so powerless to help him. I questioned my ability to teach anyone anything.

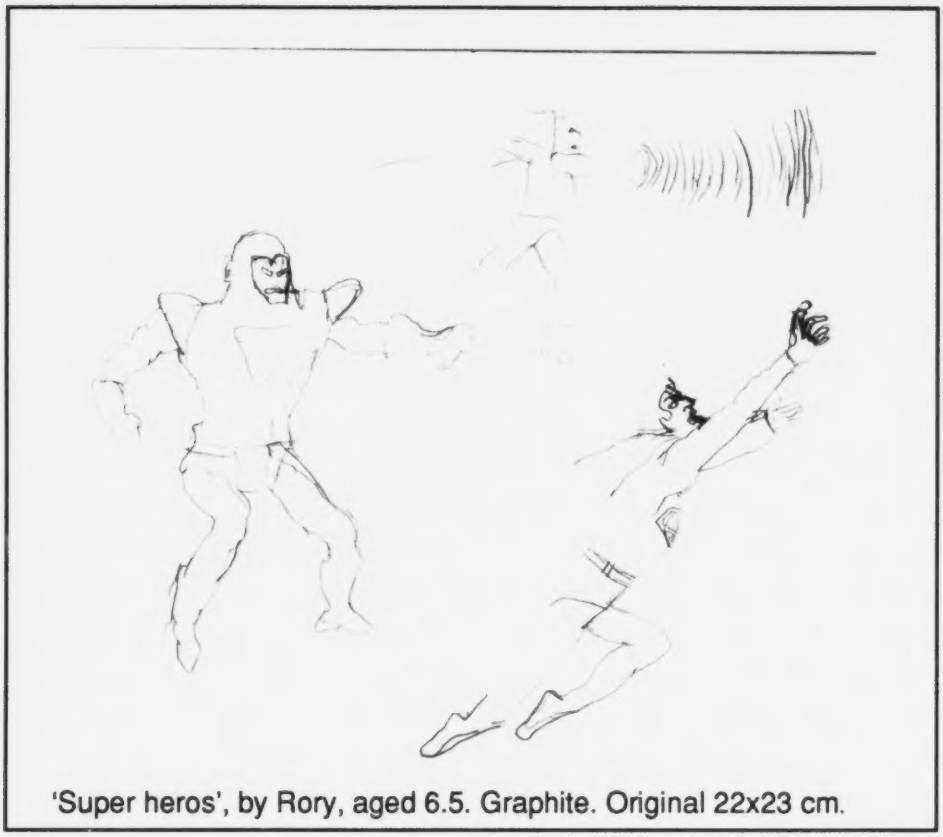
I had a heavy load that semester, six courses, it left me little time to worry much about Rory. One of my courses was a drawing studio that required me to spend many hours at the weekend in the basement at my easel. Despairing of ever getting to be with me, Rory would often come down and sit and watch me. I would talk to him about my week and he about his, sometimes I would explain my drawing exercises. Some times he would just come down and read as I drew. He had been given a big pile of Spiderman and Superman comics by a neighbor. I was too busy and self absorbed to ask him if he would like to join me in my drawing.

Later that semester one of my Education courses required that we collect a box of materials that could be used by a child, to further an interest they had, or perhaps spark an interest in something new. We had to find a child, give it to them and study their responses. I immediately thought that this might be a good way to do something special for Rory. I had been thinking about his frustrating experiences with wax crayons and couldn't help comparing it with my newly found liberating experiences with charcoal. I wished that somehow he could regain his confidence to draw. Carefully I selected a variety of drawing tools he had never used before. Tools I had never thought of giving a child; a box of soft graphite pencils, some vine charcoal, some conte crayons and compressed charcoal, a fine tipped felt pen and a ball point pen and then as an afterthought my husband's fine H lead drafting pencil. I found a special box to put them in and selected a variety of sizes and weights of paper for him to experiment with, a portfolio to keep them in, and a drawing board to work on. Next I went to the library and took out a selection of books with drawings and sketches that had

been done by a variety of famous artists, using some of the media included in his box.

I presented these materials to Rory, as a special gift just for him. I told him how each person has a medium that is right for them and how one had to experiment to find the one that was best for oneself. I showed him how to use them and some of the effects different papers gave. We talked about the line drawings the artists had done and how people often chose things in their life or surroundings, that interested them, to draw. He would have to find something he really wanted to draw, but first he was just to play around with the materials. He was thrilled to be given something so special, and spent several days playing with the materials, bringing the results to me for comment and approval. His favorite drawing tool should not have been a surprise to me; it was the drafting pencil. He liked the fine details he could get with it's point and it was not so messy as the other materials. His efforts were very tentative, but each time he came to me I tried to find at least one part of his drawing that he was happy with, and find out why. At first he drew things around the house, but he didn't find them very interesting or motivating. Then he started to copy the superheros from his comics. He chose bold scenes of victory, of Superman or Spider man saving some poor defenseless soul. He showed the strength of their muscles and the speed of their flight. He spent many hours happily lying on the floor in his room after school drawing and his drawings became bolder and more accurate. His classmates discovered he could draw superheros, and admired his ability, soon he was getting special requests for his drawings. He slowly became less anxious and although he was still not challenged in school, he started to feel he belonged. Drawing became an important part of Rory's life, he moved on to draw many of the people and experiences in his life. In high school he said it helped him to think, and keep a sense of balance, in a heavy academic load. When his time table could no longer accommodate art as a subject, he took himself to the art gallery classes two evenings a week. The High School purchased a powerful ink drawing he did of Macbeth to hang in the English room.

He is now twenty years old and continues to draw for his own sense of well-being. He does drawings as gifts for very special friends, he draws objects, buildings and scenes from his travels, he draws his ideas and significant parts of his life. Last month he phoned me from Waterloo, where he is studying architecture, to say that he and some friends had organized life drawing classes



'Super heros', by Rory, aged 6.5. Graphite. Original 22x23 cm.

for themselves on Saturday mornings, because they all missed the experience of free life drawing so much. He told me his favorite medium is now vine charcoal and it seems he is experiencing the same liberation with it that I discovered many years ago when he was struggling with wax crayons.

Helping Rory draw was my first conscious experience of mediating a child's art making efforts. I so desperately wanted to help him, I was forced to think of ways to make the drawing experience a positive one for him. The methods I chose however, were driven more by the need to fulfill my assignment than carefully thought through with Rory in mind. I was more concerned with his affective domain than any particular art theory or technique. For me then it was more important that he liked to draw than he become good at it. So perhaps it was the special attention he received from me that helped him regain his confidence rather than

any method that I used.

I believed that if he were to draw regularly then his drawing would automatically get better. Although there was an initial improvement in his draftsmanship and huge improvements in his attitude toward drawing and his confidence in himself, there was very little improvement in the artistic quality of his work over time. It was not until he went to lessons at the art gallery, that I saw any progress in the artistic merit of his work. There he worked with practicing artists, as part of an art making community. He was exposed to new ways of thinking about drawing, and involved in art critiques. Gardner (1980) suggests that although there are some examples of early competence in draftsmanship, by artists such as Picasso and Klee, there is little in the visual arts that would correspond to the prodigious accomplishments of Mozart. He found that aesthetically significant work doesn't usually appear in visual art until adolescence.

Does this mean that there is little value in encouraging or being concerned with children's early drawing activities? Bruner (1986), viewing art in relation to play, suggests that through drawing, children are practicing and developing skills that will be useful to them later in life. That children's drawing activities provide a helpful foundation for the later development of adult graphic skill. Arnheim (1969) argues for the inclusion of art lessons in all grades as the practice of using a system of pictorial symbols in drawing facilitates the child's subsequent acquisition and use of other representational systems such as mathematics and written language. Eisner (1990) suggests that the process of making a picture involves a complex combination of higher level thinking skills. He believes that art, which naturally concerns both the cognitive and affective domains simultaneously, has much to offer the learner to enable them to link the two domains and carry the resulting heightened awareness over to their understanding and mastery of other subjects. It would seem that there is some support for encouraging drawing at all ages.

A comparative study, by Winner (1982), on the development of the drawing abilities of normal and artistically gifted children indicated that both groups passed through similar stages, but at different rates,

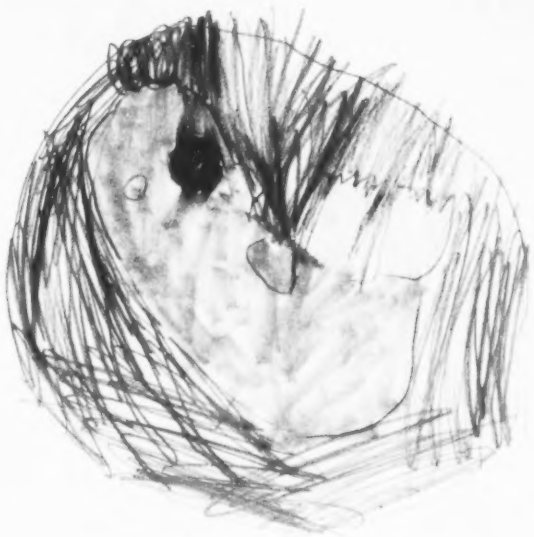
gifted children progressed faster. The limit for most children was the 'conventional stage' of drawing in adolescence, whereas gifted children continued to evolve and develop their own distinctive and personal style. In a similar study Gardner (1980) argued that if adolescents are to develop their talent, they must overcome the self-consciousness and self criticism of their age group. They had to 'come to feel, instead, that they accomplished something worthwhile in their drawing. Such a sense of accomplishment depended in turn on the ready availability of opportunities to practice drawing and the appreciation of the child's efforts by others' (Gardner 1980, p182). If younger children do not receive similar opportunities and appreciation of their effort, will they continue to progress through the same range of stages?

Wilson and Wilson (1977), studied elderly Jewish immigrants to the United States, who had not drawn since early childhood. They found that this group's drawing ability had remained static and they could only produce drawings comparable to those of a four year old. These authors argue that practice at drawing, and the exposure to other people's drawings, are essential to drawing development.

It is tempting to suggest from Rory's repeated drawings of superheros that he may have used the drawings in a projective manner, hoping that if he had superpowers, he would overcome the bullying and difficulties at school. While Goodnow (1977) does record many examples of recurring themes in children's drawings, Thomas and Silk (1990) note that adequately controlled investigations have generally failed to find support for projective interpretations. However, to voluntarily and repeatedly draw the same thing must be fulfilling some function for the child. Lowenfeld and Brittain (1975) and Gardener (1980) claim that self expression of feelings and emotions through drawing is a strong drive and may be a major reason for children to produce drawings. Lark-Horovitz, Lewis and Luca (1967), in a study of the most popular topic in children's representational drawings, found that children most often draw human figures.

I could find little conclusive evidence as to why children draw let alone why they would draw in series. I could find no studies that attempted to ask children why they draw or have their interpretation

heard in some way. Just as, until recently, the teacher's voice was absent from much of educational research, missing to an even greater extent on the topic of drawing is the voice of the child.



'Chick embryo', by Joan. Graphite and felt pen. Original 17x14 cm.

Extracts from my teaching journal

Joan drawing:

I had just introduced an incubator with six fertile eggs as part of our study about eggs. As I often do I had laid out clip boards and pencils and was encouraging the children to make drawings of what they noticed about objects and events we introduced into their environment. Several children did quick drawings of the insulated box, the window in the top and the six eggs inside. As I often do with drawings that are linked to science observations, I labeled the drawings with the words and descriptions the children gave me and displayed them for others to see what we were studying. I noticed Joan had been sitting drawing near the incubator with great concentration. Unlike the others, she had

not been doing an observational drawing, instead she had drawn an egg with a beautifully detailed embryo inside. I was both amazed and surprised. Amazed at the delicacy and empathy of her drawing, and surprised at her perspective and the information that was contained within the drawing. She told me she had seen pictures in a book of what was inside an egg, and she was thinking that this might be what was inside these eggs in the incubator. I asked what words we could put on her picture to label the head and feet etc. and she looked at me in a surprised and hurt way. 'I've drawn all there is', she said.

As teachers we give ourselves the role of art critic. We decide which work will be displayed and for what reason. We discuss our interpretations of children's drawings with colleagues, while at the same time defining what is of value and what is not, what is considered good and not so good. We become expert at reading children's drawings for developmental milestones, yet seldom do we look at the context. We rarely invite the child to discuss her art with us or with others. In my approach to Joan's drawing, my teaching needs and assumptions took precedence over Joan's intentions for her drawing. I wanted to link her drawing with the writing I was trying to promote in class and use her representation as an example of a scientifically labeled drawing from which other children could learn. Without entering into a conversation with Joan about her drawing I had imposed my own agenda. No wonder Joan gave me a bewildered and hurt look.

In the adult world of art it is common to hold 'art critiques'. Art critiques are events in which a group of artists, who have perhaps been working from the same subject or idea, get together to talk about their own, and each other's work. Each is sensitive to the exposure involved in displaying his or her work; here is a delicate part of you exposed for all to see. There is respect for each other's vulnerability. Even the act of pinning your drawing on the wall next to others takes great courage. It is difficult to put words to something that is essentially visual. Although words are chosen carefully, they never really match the visual. Many sentences are left dangling, many gestures are used as if they might more accurately describe movement and flow. Many of the words chosen have a relational quality that evokes thoughts, feelings,

moods and emotions, stemming from the experience of drawing.
In the world of the classroom, when children make a picture and we pause to comment, or a child brings us a drawing and demands a comment, what do we say and why do we say what we do? Are we ever interested in what the child might have to say about their picture? What about the many pictures that are done and tossed aside by children, or the ones slipped in their lockers to be shown only to the family? As teachers we should be concerned about the construction of meaning by the child; why don't we pay more attention to what the child is trying to say through their drawing? I believe each picture contains specific meaning for the child but I think perhaps we have an inhibition against probing into what is viewed as an essentially private communication. Even if I am able to overcome this inhibition I find myself at a loss to put words to a visual message. It can be difficult to discuss a drawing. The child will often respond in a puzzled way, just as Joan did, not understanding why the drawing is not self explanatory. Often they do not have the language to discuss their work and so will remain silent.

If I am to enter into dialogue with a child about their drawing I, as a teacher, must enter into the art making process with them, using all the pedagogical tact I can muster. In this process language may be rare or limited. The dialogue that I will attempt to capture therefore will look significantly different from other more verbal dialogue. The skill I use to capture and interpret the many non verbal clues young children display, will be invaluable to me in my observations. I often record my work with children on video, and analyze the clips to gain information about the children and my teaching. Video is invaluable to me for collecting these drawing processes as they unfold.

Jane, the teacher, drawing sunflowers with Alice, a five year old.

They sat in front of the largest sunflower head and talked about what they saw. The colors the overall shape, the patterns the seeds made and the leaves behind. As they talked they took it in turns to draw. Jane chose the color she thought most represented the seeds and then started to place small seed like marks on the paper in the pattern formation she saw in front of her. As she did this she talked about how she made the decisions she did. Why she chose the color

and why she put the marks on the paper. She also invited Alice to join her and make similar decisions. They discussed what they saw: the colors of the seeds were all different and they were set in rows that went around instead of straight. They took it in turns to put the marks on the paper. It was a collaborative event, held together by conversation.

'Sunflower', by Alice and Jane. Oil pastel. Original 28x33cm.

Jane's story of how the drawing happened was described as a conversation. As Jane told her story I became aware that I was hearing only her orientation to the story. She very much believed in her role as

one who provides a scaffold, for children's learning. Scaffolding is a support strategy where an expert provides only as much support as is needed for the child to move to the next stage. It is derived from the work of Vygotsky - what a child can do today with the help of an adult they can do tomorrow alone.

Jane believes in her role, talking of what is happening and what might be possible. However her account of the incident gave me only her point of view and the product, the voice of the child and the rich nonverbal communication was missing.

While Jane's and Alice's experience seemed to be a positive and productive one, in this instance we must always remember what power adults have to define the child's world. Children look to adults to validate their experience in cultural terms. They listen to adult linguistic responses to their way of being in the world, at home or in school. However we have to beware that the cultural terms can sometimes threaten the individual and personal sense of being and becoming. Children do not take easily to living their lives only as others would give them meaning. They need to feel the validity for themselves of the language used to describe their ways of being. They need to keep and strengthen their own voice, not feel they are losing it.

Vygotsky (1981) and his followers remind us of the balance between culture and the individual when they refer to learning and teaching as a social transaction. There is an interdependence between the individual and society so that, 'culture is the product of social life and of human social activity'.

Perhaps Malaguzzi (1970) best describes the limitations of words:

> 'We are by no means refusing to acknowledge the primary value of the spoken language in the long process of humanization. But historically we can deduce at least three facts:
>
> 1) Today the spoken language is increasingly imposed on children through imitative mechanisms which are poor in, or devoid of, inter-change, rather than through strong imaginative processes linked to experience and to the problems of experience.
>
> 2) Today education and the teaching of young children is per-

formed almost exclusively by words, the sole tool entrusted to the professionality of teachers and parents. Words are solidarity, anomalous, yet now they are omnipotent and omnipresent for teaching, repeating, directing, preaching, describing. With these solitary words, always more inert and obvious, we are moving towards a growing inability to enter into a relationship with children who expect living words, words rooted in reason and proposals, in performance, achievement and projects, in situations of warm interchange.

3) Today the spoken language is massively and in never before experienced proportions set against images, signs, symbols, codes and machines, in full stage of dis-orientation and re-elaboration.'(cited in the catalogue for the exhibition, Hundred Languages of Children, p. 23.)

It is with Malaguzzi's words in mind that I search for other ways of listening to and communicating with young children. When I view video tapes of my work with children I am able to see more clearly the many ways children communicate without speaking.

If I want to enter the visual world of drawing, and the nonverbal world of young children, it would seem appropriate to use a video camera to help me capture the many subtleties of these languages.

Ryan

Ryan and his mother had obviously planned my visit to their house carefully. As I entered the living room the lego model Ryan had been working on was displayed on the table beside his favorite books and his huge drawings lay on the floor. I encouraged Ryan to sit and talk to me about his drawing. It was a very complex picture that looked like a lot of pipes, machinery and wires. It was in fact a drawing of Ryan's interpretation of how the water came out of the taps. Every line on the page had a purpose and each one was remembered and explained to me. He had used felt pens and each color had been carefully selected to represent a particular function; for example the blue lines were pipes that carried the clean water, the red was the cable that carried the power to the machines. Each machine was carefully drawn to show the internal workings. It

took him a good half hour to very methodically work his way around the flow of water through his drawing. His mom joined us as he finished up and told me that Ryan had been hoping that he would be able to build some of these machines at school when he started next week. ------

One day we brought a moving parts, pop-up book to school. We showed him how the book parts worked. Ryan was really intrigued. He asked to take the book home over the weekend and when he returned to school he had a plan to make his own pop up book. So that I would know what he wanted to do, and to help me to help him, I asked him to draw me a plan of his book. He did and for the next week he worked at his book everyday. This was the first time Ryan had allowed us to help him in this way, and the process of having to come and get us, and to access materials we had not provided unglued him from his safe spot at the writing table. Ryan moved steadily from here to making a whole range of cutout models and then on to creating real circuits, making a slide projector and a telescope that worked.

Some children provide very detailed and sophisticated visual and verbal information. Often it is those children who most easily and clearly enlighten us as teachers. I was privileged to work with Ryan and share in his understanding of his own drawings. He has moved on to another school, but I would like to meet with him again and discuss his drawings. I wonder if his memories that surround them would in any way match my journal.

I have reviewed these excerpts and anecdotes in some detail in order to bring the reader closer to my frame of reference. They form the starting point for my inquiry, and the motivation to pursue my question in greater depth.

Purpose, Methods and Data Collection

The main purpose of my research project was to examine closely the drawing processes of children. I hoped to learn more about the meaning children's drawings held for them; what the child's intentions were when drawing, how children evaluated their work, and how drawing helped them make sense of their world. I was interested in the

pedagogical relationship within the drawing context and in finding out how we, as adults, teachers and artists, could best support the drawing efforts of young children.

In order to do this I became deeply involved with the child's art making process. Informed by the theories surrounding children's drawing, with an understanding of the nature of a pedagogical relationship and from the viewpoint of both an artist and a teacher, I have studied the twenty children in my class of four and five year olds this year, with intensive video taping for a period of two months.

I could not easily become deeply involved with twenty children's drawing processes, so I chose a smaller group to examine in more depth. I selected six children, three girls and three boys all five years of age, and formed a drawing profile for each child. This profile consists of informal discussions with the children, either in groups or alone, about their drawing processes. It includes video clips of them drawing, samples of their work and journal extracts from my teaching experiences with them. I viewed and discussed some of the video clips with the children concerned, to compare my interpretation of the content with the children's interpretations. These reviews were audio taped to allow me to participate more easily in the discussion. I have listened to what was said, and have included relevant extracts in the profiles. Many aspects of children's lives outside of school appear in their drawings within the school context. I am aware that I may not easily access the significance of some of these outside influences. It is for this reason that I have shared the children's drawing profiles with the parents of the selected children. I audio taped these discussions and the relevant extracts have been interpreted and included in the child's profile.

I have chosen the position of teacher researcher as the starting point of my study. I believe I am engaged in a pedagogical relationship with the children in my class. Many of the children have been in my classroom for two years. Over these two years, I have provided for, and engaged children in, a wide range of drawing and other art activities. These activities were usually integral parts of the larger project we were engaged in, and the children were already used to making connections

in their learning. As a teacher researcher I kept a reflective journal and collected samples of all the children's work.

'When attempting to understand the life worlds of young children, I as an adult, am confronted with the task of reconstructing narratives that are drawn from a language of action, of gesture, of activity, of silence - a living text that forms the fabric of a story which I must weave for an adult audience.' ... 'To become the story teller of childhood is to "fuse horizons" with the culture of childhood, to seek meaning that inheres in the experience of the participants is also to invest the experience with meaning so that understanding becomes, an event, a movement of history itself in which neither interpreter or text can be thought of as autonomous parts (Gadamer 1976, p. 236). As I write about the drawing lives of the children I will attempt to guide the reader as close to those lives as I can so that they see the world as the child might. As I look closely at the immediate events in their lives it seems appropriate for me to use the living, present tense.

While I am drawn to a hermeneutic approach to my study, as it promises to allow that which seems alienated and far to speak again, I am wary that hermeneutics demands that language be the central concern in the process of interpretation. 'Language shapes man's seeing and his thought - both his conception of himself and his world (the two are not so separate as they may seem). His very vision of reality is shaped by language. Far more than man realizes, he channels through language the various facets of his living - his worshipping, loving, social behavior, abstract thought; even the shape of his feelings is conformed to language' (Polakow 1985, p. 830).

I am studying visual processes, I am operating in a world of visual images and interpretations. As an artist, I know that only a small part of my understanding of visual problems has been mediated through language. Language is linear, it is written in a string of connected yet fragmented pieces. Texts are linear and individualistic, allowing us to see only one point of view at a time. To some extent this has influenced the form of western art, our theories of perspective and the dominance of vertical and horizontal are deeply embedded in our consciousness. Much of the struggle of twentieth century art involves the attempt to

try to break free from such constraints. If we examine primitive and pre-alphabet art we find that artists integrate time and space as one. 'Their graphic representation is like an X-ray. They put in everything they know, rather than only what they see. A drawing of a man hunting seal on an ice flow will show not only what is on top of the ice, but what lies underneath as well. The primitive artist twists and tilts the various possible visible aspects until they fully explain what he wishes to represent.' (McLuhan 1967, no page numbers).

I want to try to bridge this gap between language and visual representations and 'fuse the horizons' by using photographs, video clips and art samples to highlight and bring into view the process of drawing. As van Manen(1990) points out, 'It is important for human science to recognize that novels, paintings, music, and cinematography may be reflected upon phenomenologically, and thus imported into phenomenological writing.' I have videotaped and photographed children drawing in the many contexts that naturally occur within my teaching. My own interactions with the children were captured by a student who held the video camera, and by parents and students who took photographs. I hope that by responding to a visual process with other visual media I can capture the essence of the visual process. As I revisit the footage and look again at the images I am able to uncover that which had not, at first viewing, been visible to me.

'Learning to understand the essence of pedagogy as it manifests itself in particular life circumstances contributes to a more hermeneutic type of competence: a pedagogic thoughtfulness and tact. And it is characteristic of pedagogical thoughtfulness and tact that it always operates in unpredictable and contingent situations of everyday living with children' (van Manen 1990, p. 115). These uncoverings were often surprises to me. They caused me to re-examine my understanding and took me in directions I could not anticipate.

The themes appeared through a watchful need to make sense of what I reviewed and revisited. When I was open and attentive they unfolded and disclosed themselves to me. I have strived to give them a shape and describe the content in ways that make them accessible to others. The descriptions are more than just reporting and it is partially

through the process of hermeneutic inquiry that meaning is created. (Smith 1991) Literature in the field further provided me with new understanding or points of view that challenge my assumptions. The literature also caused me to change my mind and take new directions. It helped me focus more closely, so that I was able to narrow my vision and gain a depth of understanding.

I hope the children I work with will come to know the power that drawing can have in their lives. My study informs my own teaching and in some ways transforms it. I hope the process as I describe it is accessible to all people who work with young children.

Ethics

The anonymity of the subjects is protected at all times through the use of pseudonyms.

The informed consent of all parents in the class was obtained before starting the study. The informed assent of the subjects was obtained, and they were advised that they were free to withdraw from the study at any time.

The study took place within the usual context of the ongoing activities of class.

Chapter 2

THE SUNFLOWER PROJECT

'Sunflowers', photograph by Tanya. Original 18x13 cm.

Inviting children to draw

I have sunflowers growing all over my acreage this year. An artist friend who stayed, spread seeds there in spring. Now the flowers are all at different stages of development, their many sizes and shapes dictated by the conditions of their location. They seem so symbolic of fall and the cycle of nature, and are so magnificent that I wanted the children in my class to experience this. I picked some that were very different in shape, size and development and put them in a large pot in the middle of the painting table for the children to examine. As I set the flowers on the table, I was already imagining the many drawings these flowers might inspire me to make. I remembered the Impressionist Exhibition I had visited with my family in Edinburgh this summer. The pleasure of standing in front of Van Gogh's original paintings of

sunflowers, and seeing them vibrate on the canvas was intensified by being in the company of family I see only at five year intervals. I remembered the wonderfully free charcoal drawings I had done while sitting under the end of summer sun and a canopy of enormous golden heads, in the company of other artist friends. Time stood still. I didn't want the day to end. Sunflowers hold all the joys of summer for me, they contain deep and personal meanings. Seeing and touching them evoke so many wonderful memories. Many of the children in my class have sunflowers growing in their gardens and I expected the children might be similarly inspired. I could already visualize some of my able artists' drawings and paintings.

Space, Setting, and Introductions

I carefully chose a place in the room for the table. Out of the flow of traffic in a quiet corner, there would be few interruptions, few distractions. Drawing demands intense concentration. I was thoughtfully aware of the setting while setting out the flowers. The process of setting out the flowers and art materials helped to orient me to the child's perspective of my invitation to draw. Large heavy heads held firmly in a solid earthenware pot, inquisitive fingers could not easily topple the display. The textures of the seed head and the contrasting frail and bold gold of the petals invited touch. I ran my fingertips over the seedheads. The tiny stamens on each head gave softly under the pressure of my hand, some caught on my skin falling off to reveal a surprisingly pale unripened seed head beneath. Would the children do the same and notice, with the same kind of surprise, what lay beneath? Some of the flowers I laid casually on the table top lest the setting of the flowers in the pot might seem too formal or too distant for some children. The mass of one head required two hands lift it to see what hid behind the seeds. The leaves felt rough and prickly. How does one capture mass and texture in a drawing? Do children see mass and texture? Around the flowers I placed some fresh sheets of drawing paper. Enough only for four or five children to work there. Drawing needs space to move your arms freely and to lay your tools around you within easy reach.

'Drawing around the sunflowers'. Slide photo. Original 3x3 cm.

I wanted to draw the children to the flowers. As if the 'drawing to' were somehow connected to the 'drawing of'. I set out drawing tools that I knew would invite different children to draw. I wanted to introduce the children to the flowers so they could begin to form a relationship which would enable them to capture the essence; the personal meaning of the flowers for them. I am aware of the relationship each child has with a particular medium. Dana likes the bold and strong marks the oil pastels make. Claire has to have a pencil to allow space in her drawing for the many details she feels are important. Jill enjoys watercolor. Last year she became very skilled at wetting the paper and feeding in the brilliant color then allowing just the right amount of drying time to catch the details she wanted before she finished. Perhaps she will remember some of these skills and bring them to the tempera paint. I am curious to discover what she might do. Just as when I bring special friends from different parts of my life

together and am anxious for them to connect somehow, so too am I anxious that the children will connect with the sunflowers. Without a connection a conversation is difficult. I am aware that the nature of the connection is not within my control. I can set the scene, I can introduce, I can invite conversation but I cannot make them see in the same way I do.

I have tried hard to set the stage. I hope that by setting the scene and by carefully selecting the props I have provided the prompts that will enable the children to move forward and unfold the play.

Unfolding the drawing scene

These materials are just the props that will guide the participants through the process. What about the actors in this scene? How will they see this scene? What will their relationship and responses be to the objects? Do I have a role to play? As I wonder how I can draw them into representing the flowers, how I can involve them as more than just observers, I see many roles I could choose to play. These roles are defined by my expectation and my relationship with each particular child. Do I expect every child to take a leading role or will there be, as in a play, some walk on parts, sub plots and stage hands? Of course I want all my children to take the leading role but this is not how a play or life unfolds. I must respond tactfully to each child's understanding and experiences of what it means to draw, what it means to draw sunflowers. I must beware of drawing them into the limelight too soon. For the play to evolve, to become successful and polished, there must be many rehearsals. What does rehearsal look like for drawing?

The teacher as an artist

I remember my own rehearsals. An image of the art studio where I studied drawing. Easels and boards were scattered seemingly at random around the model. First I had to choose where I wanted to be in the room. How I chose my space depended very much on how I was feeling at the time, who else was there and which aspect of the model most called to me. I wandered around the room looking at the model from different angles, aware all the time of where other people were in this

space, where they were placing themselves in relation to me and the model. The lady who chattered annoyingly all the time settled herself on one side of the room and so I was able to discount that space. The man who watched every move I made and often tried to imitate me was moving in just behind me. Did I feel confident enough tonight to withstand such scrutiny? But here I had found the view of the model that spoke to me, so I set down my box of tools and studied the model more closely. Standing where I was I enjoyed the view from above her, it reminded me of coming across someone sleeping and stopping to watch the peacefulness, the soft flow of a relaxed body.

I could feel a relationship with the subject beginning. I was relating what I saw to my own life experiences, making connections with my memories. A thousand memory visions of skin and light and sleeping and bodies had flown through my mind but one or two stood out loosely connected waiting for me to draw them together into my drawing.

However I am not yet ready to start this relationship. First I have to arrange my space, become comfortable, so nothing stands between me, the model and my drawing. I like to stand when I draw. It allows me freedom to move around. Moving keeps me both relaxed and alert. Moving back allows me to see my drawing as another might see it, to check that my message is clear. I choose an easel and set the board at a comfortable height for my arm to move freely. I don't draw with my hand as I might if I were writing. Drawing is a kinesthetic experience for me. I become what I am seeing and the drawing flows through my body. Some artists take their images into their minds and allow their thoughts to play with them, the images become mixed with language and the drawing flows slowly and tentatively like words from a more controlled pencil. A drawing created this way requires a different reading. I choose vine charcoal for its immediacy and boldness, it's life. Vine charcoal was once a living twig and it demands that you feel the subtleties and respond to it through all your senses, intuitively. The paper has to have just enough bite to it to catch these subtleties; too smooth and they would slip away, too rough and the vine snags.

The stage is set, I am ready to begin. I open the curtains on my

conversation with the model, the charcoal and my drawing. I stand at a distance outside the model, I don't 'see' the model yet. I am looking at the model, but I am still looking at her casually, superficially. I have to look differently. I look more closely, carefully, but there are too many details that my eyes get caught on, and the images become fragmented and disconnected pieces. So I screw my eyes up and squint out of focus; the fragments merge into a whole, the image is simplified and it seems more possible to capture it. Which lines and shapes will be the first to meet the paper? How do I choose where to begin? There are so many decisions to make: Where on the page do I begin? How big will it be? Which part will I focus on? Do I use line or tones? This is the moment when I feel most insecure. I am being asked to invest so much of myself in something that may not work out, how can I take such a risk?

The paper glares at me threateningly and I cannot bring myself to the commitment of putting marks upon it so I begin instead to draw in the air. My hand rehearses the movements through the air in front of me tracing the flow of the model's body. It is as if by mentally touching her I can capture the kinesthetic awareness of her, the tension in her muscles, the weight of her hips on the floor, the flow of her hair as it lies spread around her head. I bring my hand back over the paper and still moving, still carrying the form of the body, it touches the paper and leaves a mark. This mark is not enough though, there is still much more information to unload from my tracing, my mental touching. Again my hand moves over the paper, touching it here and there, until I see the form emerge from the marks I leave behind. Now I have to look again. This looking now is different, it contains an element of evaluation. I compare what I see on the paper with what I see before me, but it is not a direct comparison; between these two elements lies myself. A translation occurs when the images enter my mind so that what transfers onto the paper is me, the raw me. It is the essence of myself I have captured, and thrown on the paper for all the world to see and I feel more naked than the model I am drawing.

In drawing we are creating representations of our world, our life. We are REpresenting the world as we see it. I am presenting my drawing to you, the audience. As in a presentation I have to be sure it contains

all the elements I feel you need in order to understand my message. I have captured the present, as it is lived by me, and now I present it to you. I hope you will understand at least some of it.

I give it to you, as one would give a present, chosen carefully with someone in mind. I hope that you will appreciate it. I know you may not. But are not most of the presents we choose to give away the very presents we ourselves would like to receive? Is my drawing my present to myself? After drawing I experience the same feeling of being recognized that I also feel when receiving a present. My drawing is my way of understanding myself.

Children's conversations around the sunflowers

The first few children approached the table with the sunflowers. They leaned over the table to touch them just as I had. Intrigued they stayed relaxed and open, looking at the flowers, touching them and commenting about how they felt, the color, the size. I engaged them in conversation and discussion about what they saw. They wanted to know who had brought the flowers and why. Then they started to notice they were all different. They discussed the possibility that they might be different species until one child suggested that some were older than others. She knew because she had them in her yard last year and the most enormous heads had been dried and the seeds eaten by the bluejays. We looked for the seeds in the biggest head and because they were all arranged on end several children did not believe they could actually be the sunflower seeds they knew, so we had to pull one out to see. Another child told how the sunflowers in her yard were even bigger than mine; they could see right over the fence that was even taller than her father. Another child told how the sunflowers in his yard always looked over the fence and never into the yard because they liked to face the sun. No one had yet started to paint or draw them. Some children noticed the new boxes of crayons and not recognizing the different packaging asked how to use them. The first few children to put crayon to paper were most interested in the medium of oil pastel. The range of colors was alluring and much experimentation with colors in random rubbings and merging on the paper took place. No one even seemed to remember the sunflowers

in front of them they were so absorbed with their explorations of medium and color.

I put the flowers there for the children to draw. I expected them to come to the table and almost immediately begin drawing. I was led to expect this partly because the children were in my class for a second year and have already done a lot of observational drawing with me and know something of my expectations. I assumed that if I was inspired by the flowers so would they be. However, I forgot that the children had not been a part of the planting, growing and gathering of the sunflowers. I was surprised when one child asked where they had come from.

Fortunately I was in no hurry to obtain drawings. This was not an art lesson scheduled in a timetable, so I was open to interpret the children's responses to the flowers. I became more curious about their responses to the flowers than I was about eliciting drawings. I allowed time and my openness let the children take whatever path they needed to get to the drawing. I had to listen very carefully and actively to what the children were saying though because I sensed that they might wander off if I were to bypass too quickly what they were bringing to me in their conversation. It was more important and relevant for them to tell me all their stories about sunflowers than to begin drawing them or to hear my teachings about them. They needed to re-experience sunflowers before they could 're-present' them. While they talked about their memories they were also touching the flowers. As their fingers moved gently over the flower heads they seemed to be 'seeing' the flower more specifically. The movement of their hands seemed to slow the movement of their eyes down sufficiently to allow more questions and comparisons to surface.

There were only four or five children in the group and this allowed for a more easily sustained conversation. The conversation wove its way around loosely, following the direction of the children's thoughts and memories. It was not a conversation guided by me towards specific answers. My responses reflected back to the children restatements of what they were saying. My synthesis gave the group a shared understanding. Touching and talking about the plants helped the children remember all they knew about sunflowers. Only when they had remem-

bered all they knew were they were ready to take another look at them, perhaps from someone else's point of view but maybe more as an expansion and extension of their own view.

As I become more aware of my teaching and my expectations for the children, I begin to see how I can allow space for the children's varied approaches to the drawing process. Reflecting on my expectations reminds me of a passage by van Manen in 'Researching The Lived Experience'(1990).

> 'Teacher expectations and anticipations associated with certain aims and objectives differ from having hope for our children in that expectations and anticipations easily turn into desires, wants, certainties, predictions. As teachers we tend to close ourselves off from possibilities that lie outside the direct or indirect field of vision of the expectations. To hope is to believe in possibilities. Therefore hope strengthens and builds. On the other hand, the phenomenology of specific educational objectives or broad goals is to be involved with the future of the children we teach in such a way that we always see the past as present and the present as past. And inherent in such living with children is always treating the present as burden, as something which must be overcome. There is little dwelling in such living.' (p. 123)

Inviting an artist in

I wanted to find someone who might naturally 'dwell in such living'. Someone who would draw with the children. I invited the artist who had grown the sunflowers to come and draw them beside the children.

I prepared the children for Tanya's presence by reading the book, 'All I See'. It is a wonderful story about an artist encouraging a boy to come and draw next to him. It talks about the personal nature of what each artist sees. I told them Tanya was a real artist studying drawing and sculpture at university. I also told how when she had lived in my house in the spring she had planted sunflowers all over my acreage because she loved sunflowers. Now they had grown and I had picked some

and brought them in for her to draw.

Tanya arrived looking relaxed and comfortable. She is a confident artist and makes the process look easy. She quietly walked around the sunflowers on the table examining them from every angle and touching them gently, rearranging them. She chose her composition carefully, set up her drawing board and started to work. A few children gathered around to watch. She was concentrating so hard on what she was doing that she barely raised her head to look at them. But her smile was enough to reassure them to stay and the seriousness of her efforts seemed to hold them and demand a serious response. They stood quietly and respectfully watching her every move, how she held the charcoal, how she gently smudged it. They followed her glances as if to try to see not just what she was seeing but also how she was seeing. One child even moved closer to her to try to see as she might be seeing; from her point of view. They were almost in awe of her. I wonder if the children sensed the feeling of disembodiment one gets when lost in the act of drawing? I was concerned they might be too shy to work next to her so I broke the spell by examining the contents of her tool box. She uses mainly charcoal to draw, blending in other mediums like graphite and pastel occasionally. They had never seen charcoal before so I picked a few pieces out and put them on the table for the children to examine. Slowly Claire and Tess started to make marks on the paper with the charcoal. The medium was new to them but they seemed to enjoy its responsiveness. As they worked they often stopped to watch Tanya and tried to copy her gestures and moves. They put a few lines down as she did then stopped to look carefully at the effect they had created. They checked it out with her drawing and with the sunflowers in front of them. They adopted the authentic concentration and dedication Tanya was so unconsciously modeling.

Exploring the notion of mentorship

'Everyone of us needs a mentor who, because she is detached and disinterested, can hold up a mirror to us' - PW Keve.

You are what you teach; a real art teacher is a person who embodies art. For the children drawing with Tanya she embodied what

art means, what it means to be an artist. The only connection they had with Tanya was through the drawing. Tanya was a mentor in the true

'Sunflower', by Beth. Charcoal and crayon. Original 42x30 cm.

sense of the word; mentor- a close, trusted and experienced counselor or guide. After she left at the end of the day three girls came to me and said they wished they too could be an artist one day.

Tanya had not allowed the children's lack of experience to alter her. She had not simplified her drawing so that it might be more accessible to the children. Nor had she cut the experience into bite sized pieces in the mistaken belief that this would make it easier to learn. Instead she allowed the children to take from her those things they were capable of using and which were useful to them at that time. Each child took something different and there was no attempt to standardize the learning process. Tanya, in her role as artist was able to live with the children 'as if' they were capable, 'as if' they could see, 'as if' it were

possible for them. She was able to, as Vygotsky suggests, allow each child to work in their zone of proximal development. Working beside Tanya opened possibilities for the children that allowed them to move beyond where they might be.

> *'The way we understand our children is a telltale of the way we understand ourselves. We truly open ourselves to a child's way of being when we are able to experience openness ourselves.'(Max van Manen, 1986, p.80.)*

As I watched the children draw beside Tanya I became aware that I was not seen by them as an artist. They see me as teacher and I am aware that as teacher I feel compelled to see with the eyes of a teacher. Yet I am also an artist and as an artist I see the children as an artist might see fellow artists; each an individual capable of creating very different images of the same thing. I am never surprised by the differences in the images children create because in each image I see more clearly some of the essence of the individual who created it. As teacher I feel an urgency to have the children create images that are true to life, recognizable and somewhat realistic. I can show these images to their parents and my colleagues and they will be recognized as sunflowers. They will be proof that the children have been doing something tangible and worthwhile. As an artist I find I am more open to children's possibilities and I delight in their ability to play with the idea and image of sunflower in abstract and playful ways. I can appreciate how they have captured the essence of what sunflowers mean to them and how through this rendering they have realized a part of themselves that was before hidden. The sunflowers become a vehicle for a deeper understanding of the self rather than a more impersonal illustration of something outside of the self.

I would like to think it possible that the word 'teacher' could be replaced with the word 'artist'. That my vision as an artist would carry over into my teaching and each child would be seen by me as a masterpiece unfolding, as masters of their own learning, capable of creating their own visions of themselves and for themselves. Yet the

way I observe children when I teach has to be a different kind of seeing than the one I use to draw. I observe the children closely but I have to

'Sunflower', by Richard. Charcoal and oil pastel. Original 40x30 cm.

respect a distance. As a teacher I have to be there for the children; they cannot be there for me. If I bring the child so close to me that they serve my needs then I cannot have the distance that allows me to be there for them. Fulfilling someone else's needs can inhibit the fulfilling of one's own.

There are elements of my observations of children that are similar to my artist's seeing. As I observe Claire I see the many details of what it means to be Claire. As she stands relaxed yet attentive to what Tanya is doing I notice her gaze following Tanya's glances from her drawing to the flowers. Now I remember Claire watching her mother's and my face as we talked. Her eyes following our conversation back and forth in the same way she does now, following Tanya's

conversation with the flowers. I see Claire as she is in many other settings, both in her home and at school. I see a part of what she brings to the drawing and my image of who Claire is becomes richer.

Observing children with an artist's eyes, with an openness to how each child is living the here and now, I am able to see each child in such a way as to allow me to 'dwell in the living' with them. I become aware of how I have seen them in many different settings at other times; and their past and their future becomes present and I can marvel as to who they are.

'Sunflower', by Denise. Charcoal. Original 40x30 cm.

Art brings the possibility for truly interpersonal conversation and connection. If we can, in some way, see what the child sees and feel what the child feels and acknowledge their seeing, their feeling and their representation as valid then we will be able reach out and touch

the child in authentic ways. The child has to experience being seen through the response of the teacher. I have to move beyond the usual comment, 'That's a nice picture'. I have to discover what it is each child has brought to me in their art so that I can acknowledge it and thereby help each child acknowledge it's existence and value it for themselves. The REpresenting by the children of themselves, through the drawing, shows me their vulnerability, and it is this vulnerability that appeals to me to act on their behalf. (van Manen, 1991, p.140) I must act to strengthen their drawing voices, so they can better understand and communicate with the world.

My response to what the child brings me must go beyond the here and now; it must carry the child forward. It's not just a question of seeing what the child brings us and acknowledging it; experiencing drawing with children means that we, as teachers, are called to give back to children that which can move them forward to become who they want to be.

Chapter 3

THE POND PROJECT

Bringing the pond into the classroom

Spring has come. After a long cold winter it is welcomed with enthusiasm by children and adults alike. We emerge from the classroom and enjoy walks around campus noticing signs of spring.

In the longer evenings I walk through the woods on my acreage drinking in the sweet smell of the new sap rising. It is invigorating, it gives me new energy. Overhead skeins of geese are finding their way North to their breeding grounds. Frogs are emerging from the mud and the air is filled with the sounds of them calling. I am looking for their eggs to take into the classroom so the children can watch them grow. I wish I could bring the classroom to the frogs.

Each year I create a pond on a table top in the classroom. I bring jugs of water from my pond to fill it. The water teems with new life; mosquito larvae, water mites, diving beetles, back swimmers, worms, tadpoles and leeches move among the pond weed and algae.

I place chairs around the pond table to invite the children to stay and look. On the ledge around the pond I put magnifying glasses to see the tiny insects more clearly. Paper, pencils, clipboards and crayons are available in case anyone wants to draw what they see. On a shelf next to the pond I put some reference books to help us answer the many questions I know will arise.

The first day many children gather in small groups around the pond to look down through the water for insects. They bring their parents into the room to see this new addition to their classroom. Together parents and children peer into the water talking about what they see. Every now and then someone will find a really interesting insect, so everyone rushes over to that side of the pond to see too. They discuss what it might be, what it looks like, the way it moves, what it might eat. The information and the questions are tossed freely but thoughtfully around the group. Someone notices the silvery air bubble under a diving beetle

and exclaims that it is carrying treasure. I tell them that it is a pocket of air so that the beetle can breath under the water. Someone remembers scuba divers they had watched on holiday, and connects the two events. They look to see if mosquito larvae or water mites trap air bubbles, and discover that some insects don't need the air. One child laughs at the movements of the mosquito larva and tries to imitate it. Those nearby join in the fun of trying to wiggle like the larva. The children want to scoop up the tiny insects and hold them. They want to dabble their hands in the water but I tell them they shouldn't because the oils, salts and germs on their hands will kill the insects. No one does any drawing, instead we talk and relive our experiences of ponds and pond life.

I now know we must visit a real pond. We decide to visit the Devonian Botanical Gardens and do a pond study with the naturalists. On arrival, the children are led to the edge of the pond. As they peer down through the dark water, they can't see anything. The pond is large and quite deep. It is hard to see through the surface reflections. There are rushes and water plants growing at the edges, the ground is soggy and some are afraid they will fall in. Suddenly someone spots a water boatman and the naturalist scoops it out with his net and washes it into a pail for all to observe. The children are given nets and pails and they work in small groups, carefully dipping their nets into the pond and helping each other to wash the contents out into the pails. As the pails fill up with specimens the naturalist moves from group to group identifying the contents and answering the children's many questions. The naturalist is enthusiastic and takes their questions seriously. The children respond to being in the company of an expert with their thoughtful attention and respect for the specimens. Everyone is fully engaged and could probably spend the rest of the day happily dipping at the edge of the pond.

Each child collects a pond specimen in a small container to take to the lab for a closer examination under the microscope. Here a whole new world was opened to them. The insects they saw before as small and formless are revealed to them with legs, mouths, eyes, antennae and bristles. They see that the fresh water shrimp are encased in segmented shells just like sea shrimp they eat. They see the mouth of the leech. The

naturalist asks each child to draw their specimen on the blackboard so that it can be discussed with the group. He asks them to draw as much detail as possible. For many the experience of drawing with chalk on a blackboard is new. Balancing high on a chair to draw adds its own extra challenge. I am surprised to see how much they remember.

Drawing from memory

Back in the classroom we meet in small groups to discuss our visit. Our conversation draws out memories; we gather them together for all to see. As each child tells their story it is confirmed and expands our understanding so that collectively we complete the bigger picture of our visit to the pond. Now I ask each child to take one tiny, personal piece of this picture we have discussed and capture it in a drawing. As each child takes a paper and selects the mark makers he or she wants to use, the group moves from being a close knit social discussion group into a drawing group. It strikes me how different this looks. Each child has found and defined his or her own personal space. Some have moved right away into a large space on the floor, others choose cozy corners. It is as if the physical isolation will somehow help them deconstruct the larger picture and allows them to find their own piece of the picture with which to make a more personal statement.

Our collective memory and our personal memories are very different. In the collective world of the classroom I wonder if we allow spaces for the more personal memories children have?

Two friends have chosen to stay close but as I watch them even they seem self absorbed, each grappling with her own different problem of how to begin. Neither has begun to draw. Francis is looking around at the others, her face thoughtful and serious. Her friend is watching her for her cue to begin. I stoop down to check that they understand my instructions. Francis tells me that it is hard for her to think of just one thing when she enjoyed and remembered everything. She says it is hard because the most important thing she remembers about the pond visit is not the pond but rather the pepperoni stick she had for lunch, and she doesn't suppose that is a very 'pond' thing to draw. She tells me how she and her mom went to the grocery store the day before the pond visit so

that she could pick out some things to put in her packed lunch. This was the first time she had a packed lunch for school and the first time she had a whole pepperoni stick for herself. I tell her that this sounds a very important thing to capture in a drawing. She sighs with relief and begins right away with bold and confident strokes.

I see a joyous image of herself emerge on the page. She is facing the audience, arms wide, with a huge smile on her face, holding aloft a giant pepperoni stick. As she proudly gives me her picture she whispers confidentially that she made the pepperoni stick bigger than it was because it was so good. I nod and smile and tell her that I can see by the expression she has drawn on her face that she is holding up something she likes. I also notice that she drew a frog in a bucket beside her. As she skips off to start her next task I wonder what would have happened if I had insisted that she draw the pond we had been visiting. After all we are doing a pond study. I had tried hard to give each child the same rich experience of visiting a pond. We had discussed our collective experience. Francis had sensed my need to collect pond drawings, but I sensed in her a greater need to first capture and acknowledge what was important to her. After I validated her experience she was able to see beyond it. I feel that we both reached out and touched each other half way. When I am out of touch with the children I teach, I am no longer able to see the world as they see it. To lose touch with someone means that you are no longer 'in communication' with them. Francis's drawing communicates more to me than what was important to her on our pond trip.

Drawing on our teaching memories

Francis put me in touch with a teaching memory. She reminded me of a lesson Jan taught me earlier in the year.

Jan loves to draw. She draws frequently, both in class and at home. She usually draws the same thing, a house with herself and her dog and her bunny next to it. Even when we are all drawing an interesting object right in front of us she will still draw this same picture. She gives her pictures away as presents, almost like tokens of herself. 'Here is part of me for you', they seem to say. They were done in such quantity and

always looked very much the same so they were mostly ignored. I asked her mother what she drew at home and it seemed she drew the same things at home too. Then one week her drawing changed: she drew only bunnies. The bunnies were sad and old. I asked her about them and she told me she missed her pet bunny. It had gone to live on a farm when the family acquired a new puppy. I talked to her mother about the bunny and she told me the sad tale of how they had recently been to visit the bunny at the farm. They arrived minutes after the farm dog had caught and killed her pet. Jan had cried all the way home and far into the night. Each time Jan brings me a bunny picture now I make sure I take time to talk with her about it. Slowly Jan started to bring me other pictures, pictures about herself and her home and her family, she expected me to talk about them too, and so I did. One day she brought me a puppet she had made and I decided to interview her on video with her puppet. She was so thrilled she almost visible puffed with pride.

She then took the puppet to the drawing table, set the puppet where she could see it well and did three clear direct representational drawings of the puppet. The third drawing she did had arms on it although the puppet did not, so when she brought it to me I talked with her about the arms. She said it was too hard for her to make cloth arms but she really wanted the puppet to have arms so she drew them on one of her pictures. I suggested several ways she could in fact put arms on her puppet and she went off to do this.

Later in the morning I noticed her at the writing table making a book about her puppet. It was full of beautiful drawings of the puppet's visit to the park, playing on swings and on the slide.

Jan gave me a big hug before she went home that day. She knew that I had tried to reach out and touch her, she was returning my touch. I saw what it was she was bringing me and she felt the security of unconditional acceptance. We had made a connection. When we are touched by someone's kindness or we watch a touching scene unfold it implies an intimacy and authenticity that brings a deeper understanding. There is an unspoken communication.

Looking back, I now see that she was asking me to first accept her as she was and was not getting that affirmation from me because I

wanted something different from her. I wanted her to perform according to the script I had for children doing representational drawings. i.e. that they would try very hard to draw only what they saw. There was little room in this agenda for bringing their own lives into view. Little room for their own voice.
Accepting what Jan brought me of herself allowed me to not only know Jan more intimately, but also to move her along in her real love and need to draw. She was empowered to use drawing in all areas of her learning.

Touch

When Moira saw that Francis was drawing her lunch she too laid out an inventory of all the things she brought for lunch. Her laying out was like a recall game. She laid the items out in the order she had eaten them as if she were eating them over again. As she drew, she debated aloud whether or not she actually had brought that item for lunch. Remembering was hard for her and she quickly moved on to what she really wanted to draw; the large frog she had caught in a bucket, and had spent most of the morning touching and watching. She did not draw the bucket but spent a long time drawing the frog in quite a lot of detail. The color was not important to her, she just kept the marker she was already using, she seemed more intent on finding the form of the frog. The body was carefully measured out to be actual life size. It's limbs were well proportioned and through the marks she made when rounding out the body, she created a texture to its skin. The imprint of the frog had been felt in her mind.

> 'In fetuses, touch is the first sense to develop, and in new born it's automatic before the eyes are open or the baby begins to make sense of the world.' (Ackerman, 1990, p79)

Babies live in a world of sensations. To know an object they will pick it up and put it in their mouth, feel it with their tongues, taste it, smell it. Babies thrive on being touched and depend on touch to confirm what they see. We live in a three dimensional world and touch helps our

eyes learn more about what they are seeing. Sitting with my cat in my lap my hand moves over its head, down its back and along its tail. I can feel the shape of its body under my hand. I can see that my cat has two triangular shaped ears on the top of its head but until I run my hand over them I don't know whether they are stiff and brittle or flexible and soft. Usually my cat will press her head against my touch, laying her ears back responsively so that my hand can more easily move over them and touch more of her head. Today she has heard a dog pass by and her ears are on the alert, as I stroke her head she lifts it so that my hand will bypass the ears. The ears are not flat but curve around a curiously convoluted hollow in the middle. Feeling the cats ears tells me more than I would ever have known had I just looked at them.

Children use touch to confirm what they see. I remember observing Francis making a drawing of herself. She worked away by herself for about twenty minutes, stopping frequently to go and look at herself in the mirror. I went over to look at what she had done and was just astounded at the detail she had captured. I had never seen Francis draw like this before. My excitement must have been noticeable to Francis because she looked a little startled. I explained that I was really pleased to see so much detail and asked how she had managed it. Francis always seriously considers her answers. So she stopped and looked hard at her drawing and then said, 'Well, I heard Carrie telling Moira that she liked lots of detail so I just kept looking at myself in the mirror until I thought I had done everything'. I looked at her picture with her again and commented on the eyes and eyebrows, the ears and ear holes she had drawn. Then I noticed she had nose holes drawn too and I said that surprised me because they were hard to see and most people missed them. She assured me that had been hard for her too and that she had found a way to make sure; 'you just need to run your fingers over your face, you know,(and she showed me) and then you find all the parts and the holes, but I also checked in the mirror too and sure enough they were there, so then I just drew them,' she said. When she pointed out the legs she seemed quite proud of she said, 'You might notice these legs are not straight like my other drawings because I feel them bend at the knees'. Then she said, 'There are some bits I put in even when I didn't see them.

See, I wanted earrings and I drew them, and I wanted to be wearing my best shoes with the pictures on. You know, Carrie didn't understand about the pictures on my shoes because she hasn't seen my best shoes yet, I just remembered how they are and drew them.'

The next day I found another drawing of herself, with just as much detail, in my mail box. She told me that it was one I could keep. The other one was on the wall and because I seemed to like these drawings I might want one for myself.

Touch as a way of knowing size and proportion

My body is a measure of how objects fill space. The cat fits perfectly on my lap, its chin resting on my knee and its body stretched up the full length of my thighs. My hands that reach to stroke it are always the same distance from my body and carry a record of other bodies that have sat on my lap. My baby, at three months, lies flat on his back on my thighs. His head and body fill my lap so that his legs and feet had to rest on my stomach and chest. My toddler, heavier and too big to lie on my lap, sits sideways with his legs dangling not yet touching the floor. My eight year old, who has moved over onto my lap so that he can see over the heads in front of him at the pantomime, is so tall he has both feet on the floor and I cannot see over his head. My legs ache under his weight. As the cat strolls down the drive to greet my son home from school, the cat looks bigger than my son from where I stand. Perhaps objects expand and contract! My eyes tell me that one is larger than the other, but I have held both of them so I know that it is their distance away from me that changes the appearance of their size.

Gordon's exploration of proportion and space

Gordon has chosen to sit facing the wall, secluded in a corner by himself with his back to everyone else working, while he is drawing his memory picture. Gordon finds the movement and noise of others working around him distracting and I find it interesting that he has chosen to seclude himself in this way. He is a very independent and self motivated worker who prefers to work on his own, although he does enjoy the company of others and is very willing to help and share his expertise.

Gordon is particularly interested in exploring the notion of size and space. For several months now his drawings reflect some of the understanding and challenges he is working with. His memory of all his previous experiences are also reflected in his drawings.

At the end of this summer there were two very important events in Gordon's life. The first was taking part in the renovations of his new school, the other was helping to build a new garage in his yard. When the school renovations were being done Gordon came to the site every day with his mom, who was one of the teachers. Each time they came there was something different to see and each time he was able to help in different ways. He saw both the partition wall and the block wall being taken down. He tested his strength on the heavy hammers and helped move materials. He watched as new walls were constructed and the room openings were framed. He saw how his lived space was being altered. He learned all about 'mud' and construction and some new carpentry skills. He made friends with Bob, the construction foreman, and asked him many questions about what he was doing. Bob has three young children of his own and was delighted to answer Gordon's questions and have him work beside him to learn some of the tricks of his trade. When the school renovations were finished Bob then went to Gordon's house to build their new garage. When Gordon was not in school he was watching the garage construction or working with Bob and his father. He was seeing whole new spaces being developed from start to finish. He was able to see how the blueprints related to the construction of the garage. Gordon's father was able to explain all the many details of the whole process because he is a Civil Engineer.

When school started Gordon had many ideas and new skills he wanted to try out at the woodwork bench, however our pieces of wood were much smaller than those of his summer experiences. The first thing Gordon had to do was to scale down, so he decided to make some things for Castor (his stuffed toy).

Last year at the Child Study Centre Gordon learned that he needed to think carefully about what he wanted to do and to draw a plan of what he was going to build. He also learned that some woodwork projects take several days to finish and that you need to plan your time carefully. This

year Gordon was able to extend this understanding into a project that lasted for over one month and became progressively more complex.

This project started with a sofa for Castor. Working on his own, first he hunted through the box of wood scraps a parent had brought in from a cutting factory. He could not find two pieces the same length for the base and the back so he selected two uneven pieces and cut them the same length. He measured the length by laying one piece on top of the other with two ends flush and drew a cutting line where the smaller one ended. He wanted to nail the back to a base but he could not find a nail that was long enough to go through two pieces of wood. He tested all the nails we had by placing them against the width of the wood they were to hold together. He then came to me to check whether I had any more nails in the cupboard. I didn't, so he asked if I would help him glue it with the hot glue gun. He had wanted to make the legs out of wood but because we had no nails long enough he had to rethink his plans. He looked through our beautiful junk boxes and tried out several different things like spools, film boxes and corks. He was not satisfied with these. Then he noticed that his friend Richard was making a mast for his boat out of a nail with a large head. He thought that if the nail was turned upside down it might make a good strong leg for his sofa. He carefully selected four large nails the same length and hammered them into each bottom corner of the sofa. He proudly told me that he had discovered a way to make sure they all stuck out the same distance so the sofa didn't wobble. He had used the width of the hammer head as the standard for the nails to measure against. He finished off his sofa by carefully sanding it all over so there were no slivers and chose some fabric Castor would like to cover the seat and make it comfortable. He then built a table, chair, bed and climber for Castor.

Gordon's parents have played a crucial role in supporting not only this project but all of his learning so far. They are very aware of what Gordon is doing in school, what he is interested in and how this can be extended into his activities at home and outside of school. Gordon told me how his parents and brother were very interested in all the wooden things he was making for Castor at school and how they discussed his work with him. They had helped him by suggesting that he might also

'Castor's furniture', by Gordon, aged 5.5 years.

like to try to make some things out of duplo for Castor, because duplo has wheels. Together they made a car with two trailers, one for his luggage and one for his racing car. They also found some wood at home for him to make a counter. Gordon's parents are aware, as we are, that children look to adults to validate their experiences in cultural terms. They are also aware that children do not take easily to living their lives as others would give them meaning. Children need support to keep and strengthen their own voice.

Gordon arrived at school one day with a large square piece of plywood he had been given by Bob when they were building the garage. He already had a clear idea of what he wanted to do with it. It would make a perfect seat for a chair for himself and all he needed was for me to provide the wood for the legs. He remembered seeing me put the left over piece of a 2 by 4 wood stud from the table legs I had built for the Centre in the cupboard and asked if he could use that piece. In case I might not be easily persuaded he assured me that he had already decided the other pieces of thinner wood we had out would not be strong enough for his weight and it might be dangerous for him. He said he would draw his plan

while I went and got the wood.

The piece of 2 by 4 was about two metres long so he had to cut it. When Gordon had made Castor's chair he had learned that all the legs had to be the same length or the chair would wobble. How could we divide this wood into four equal pieces that would be the right height for him? Gordon suggested that we measure one of the chairs in the room, he also suggested we measure the distance between his knee and the floor. Using a carpenter's tape measure we did this recording both measurements. They were different so Gordon had me hold the wood against his leg while he tried out what he felt would be right for him. We took this measurement to the wood and starting at one end measured four times until we had cut marks for four legs. It took him the next hour to make the cuts!

While he was sawing he shared his ideas and plans with some of the other children who were working at the wood work bench. One child wanted to do the same but Gordon said he couldn't for two reasons: there was no more 2 by 4 left and he advised that the best way to learn about furniture building was to start by making small models like he did.

The next day Gordon started to fix the legs onto the seat. He told me he had been looking at chairs and the legs were all stuck to the bottom of the seat. It was hard to hold the seat and hammer the nail through and he needed some help fixing the leg in the vice at just the right place. When the seat was firmly attached to the legs he tried it out. It seemed a little wobbly. Gordon thought this was because there was no back on the seat so he hunted through the box of wood and came up with three pieces that he felt would make a back. He spent the next hour measuring and sawing and nailing on his own until the chair had a back. He tried it again but it was still wobbly. This time he thought it was because the back kept tipping over, so he found some triangular pieces of wood to strengthen the back.

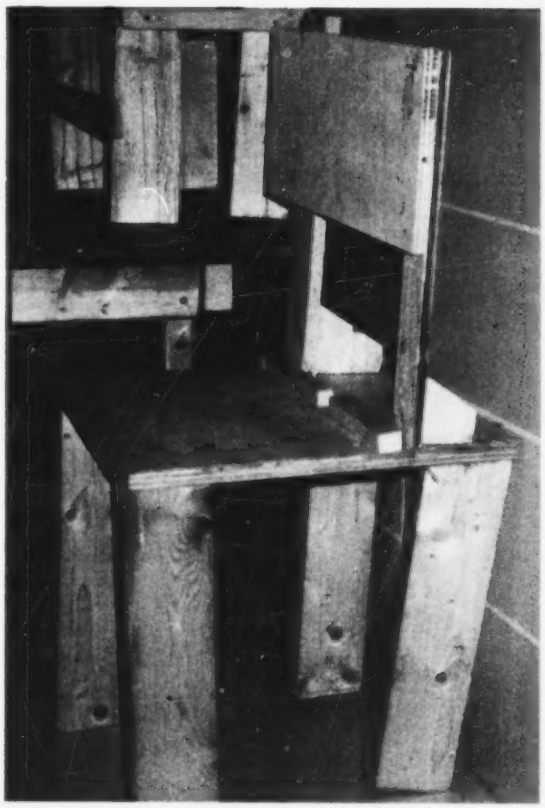
The next day when we were sitting on small wooden chairs in the gym I noticed Gordon crawling around under his chair looking to see how it was constructed. On our way back from gym he told me that he thought he knew how to make his chair stronger so it wouldn't wobble. He said that the chairs in the gym had crossbraces and perhaps if he put

crossbraces on his it would stop falling apart. He found some long thin pieces of wood and cut them to fit and he asked my help to nail them on. They made his chair very strong. After sanding it carefully he took it home and sat it on his deck in the sun.

Next week Gordon arrived with another square piece of plywood and spent the rest of that week making another chair with no help from me at all. He took this one home for his brother.

Gordon's mom told me how he then spent all weekend making a table so that he and his brother could eat out on the deck. When his parents had too many visitors to fit around their dining table Gordon thought it would be helpful if he and his brother would eat outside.

Gordon's woodwork projects have helped confirm my belief that



'Chair', by Gordon, 5.5 years. Wood construction, 80 cm tall.

teaching and learning are culturally embedded and interactive processes. When we take significant events in children's lives and help them gain an understanding of the world in which they live then learning becomes a powerful and personally meaningful event that is self-sustaining.

As I look at Gordon's memory drawing of his field visit I see he has drawn the grass at the edge of the pond and himself looking into the pond. He is alone yet in proportion to the rest of the pond. I ask him what he is doing in the picture and he tells me that he is standing at the edge of the pond with a net in his hand. He has seen a water beetle and is about to catch it. I look closely and see the tiny net in his hand; everything is relatively proportional.

Looking at Gordon's drawing I remember now how I had often noticed him wander off on the field visit to find a spot on his own. He looks lonely in his picture. I ask him why he is alone. He tells me that the other children were being too noisy and pushy. Every time he found something to catch, it was frightened away by the noise or splashing so he had found a quiet place by himself and it was much better. As we talk he has been coloring the vast expanse of sky bright blue. He remembers it was a hot and sunny day. Looking at Gordon's drawing and thinking

'Memory of pond', by Gordon, aged 5.5 years. Graphite, crayon and felt pen. Original 20x28 cm.

about his other drawings I begin to see the patterns in Gordon's learning. He started by making furniture for his toy beaver, Castor. He carefully measured the pieces so that they would fit Castor. He moved from that project to making furniture to fit himself. Because he did so many woodwork projects that required him to think about scale he now has a pretty clear idea about proportion and size. This is reflected in his drawings. His family and friends are always drawn on the same plane and sized appropriately.

More recently Gordon drew two tiny drawings of native people driving buffalo up a hill towards an escarpment with a piskin below. Although the paper was only 10 cm by 10 cm he managed the proportion so well that the viewer was able to experience the vastness of the landscape and the height of the jump. He has explored how big to make Alberta skies and has discovered that the color of the sky and the position of the sun can indicate what time of day it is and what the weather is like. He has used this knowledge in several drawings very

'Piskin', by Gordon, aged 5.8. Watercolor.
Original 13x13 cm.

effectively. Several days later he decided to translate this same picture of the buffalo drive onto a large piece of paper 90 cm by 120 cm. He showed remarkable understanding of scale and his picture lost little in the enlargement process.

Gordon did not draw often in class and when he did he often used drawing to test out the theories that he had been working with in his wood projects. His plan drawings were used in much the same way as a blueprint, as a guide for the direction of his work.

A recent study by Cathy Nutbrown(1994) has identified that young children follow trains of thought in their learning that help them make sense of their lived experiences. They will pursue these experiences, conscientiously exploring the same concept in many different ways. She

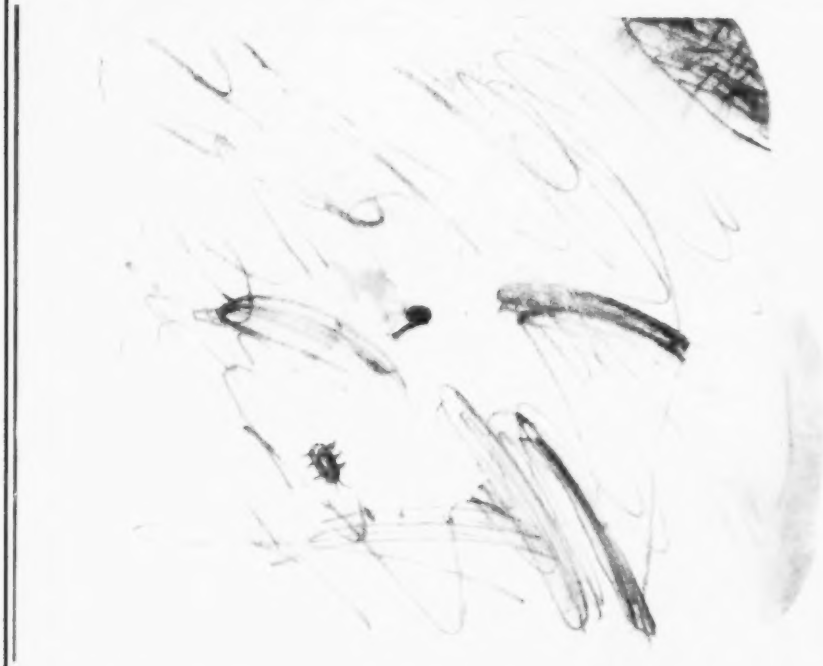
'Piskin enlarged', by Gordon, aged 5.8. Poster paint. original 1x0.8 metres.

suggests that those working with young children need to consider the children's forms of thought and provide opportunities for pursuing these forms of thought, or schemas, rather than focusing on the content of a certain topic.

Gordon's drawings were part of his larger schema. It was his need to explore this schema in depth that provided the motivation for the projects he undertook.

Seeing/looking/watching

Jan is the first to draw the pond today. She enjoys the water crayons and I think the medium, combined with her love of living things, draws her to this area. She is an independent and organized person and as she moves to the area I know that she will not need my support to begin her drawing, but she will need it later to confirm what she has



'Pond study', by Jan, aged 5.5. Water crayons. Original 13x13 cm.

drawn. She takes a clipboard with paper, looks briefly into the pond, then balancing the clipboard on the edge of the pond and standing relaxed and confident she begins to draw what she sees in the pond. Jan spends about ten minutes drawing. She glances at the pond occasionally and

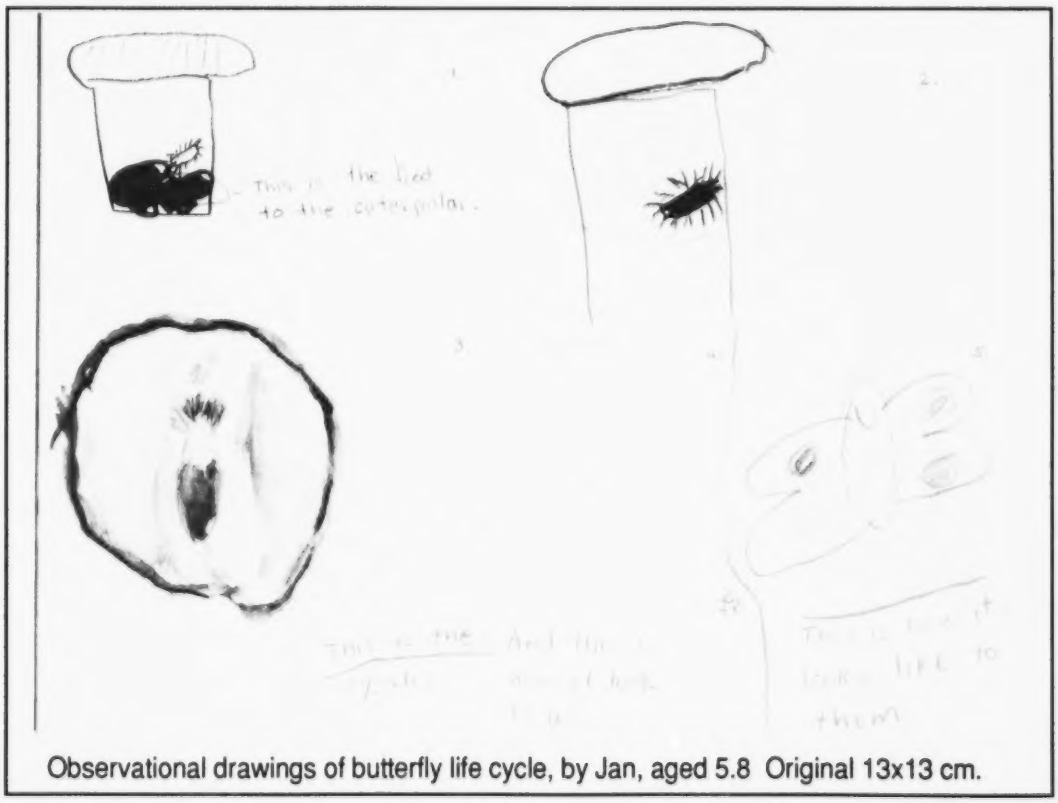
seems intent on drawing the water and the bits of plants floating in it and on it. She is seeing the multiple levels of the pond. She draws the pond bottom, the bits of mud and sticks there, what is in the water above and the plants that sit on top of the water. Perhaps because she is looking down from above her drawing perspective is an aerial one. She stops her drawing to look more closely in the pond for a while and notices a diving beetle. She carefully places it in the drawing.

I watch her out the corner of my eye, getting ready to move in and talk with her about her drawing as I now know she likes me to, and I can see how far she has come since the beginning of the year when all she would draw was herself, her dog and her bunnies. It had tended to be a very introverted and repetitive use of drawing which she could not see or move beyond. Watching her closely, I have acknowledged and supported her need to express her life through drawing, and she has been able to satisfy her need to draw the same picture over and over for reassurance and move beyond to enjoy a range of drawing activities. She is able to look outward and notice and capture the details in her surroundings. She has learned to look closely and takes great pride in noticing details others miss. Jan has learned to look beyond herself and in this process has brought life closer to her. She has allowed others into the circle Berger describes and has learned to see the whole circle. 'We only see what we look at. To look is an act of choice. As a result of this act, what we see is brought within our reach - though not necessarily within arm's reach. ..... We never look at just one thing; we are always looking at the relation between things and ourselves. Our vision is continually active, continually moving, continually holding things in a circle around itself, constituting what is present to us as we are. (1972. Berger J, p. 8)

When Jan chose to record the changes and development of our classroom caterpillars she used her observational drawing as one of several strategies for learning. Each time she noticed a major change she would carefully record it on a piece of paper. The pieces of paper were kept in her locker, to be made into a book later. When the caterpillars changed into the pupa stage we hung them in a large cage and waited for the next stage. On the day the butterflies began to crack

the cases of their cocoons she spent the whole morning watching, with awe, the fragile forms emerge with crumpled wings and then slowly straighten themselves out into beautiful butterflies. Jan recorded several impressions of the butterflies, using different mediums. The page for her book had two pictures which she ask me to caption. Under the small butterfly she wanted, 'This is how butterflies look to us'. Under the much larger butterfly she wanted, 'This is how butterflies look to themselves'. Jan was not only thinking about what the butterfly looked like to her, but she was also considering how we might appear to a butterfly. To complete her book she laid her drawings from the past weeks in order across the table then carefully stapled them together.

She immediately made another book, very hastily sketching the elements of her first book so they followed the same sequence. When she brought both of them for me to see she told me, as one who has discovered the joy of finding out something for themselves, that this cycle happens over and over for these caterpillars and butterflies.



Observational drawings of butterfly life cycle, by Jan, aged 5.8 Original 13x13 cm.

(Except, as she told me two days later, for those chrysalids that did not hatch.)

Francis walks slowly past Jan noticing her drawing. She moves on past her and sits opposite, quietly watching her. She is not looking in the pond but instead watches every move of Jan's as she draws. I see her follow Jan's eyes from the pond to her drawing. She watches to find

Drawing understanding of butterfly life cycle, by Jan, aged 5.5 yrs. Orig. 13x13 cm.

out which marks Jan will put on the paper to confirm what it is Jan is seeing. She knows no words are needed. She has relied so heavily on watching carefully for the first few years of her life perhaps it does not occur to her to ask. As an adult I forget how many tiny details in their surroundings children pay attention to. I remember walks with my own toddlers taking forever because they would stop to look at every tiny stone on the path, each one a wonder to them. I remember cooking meals

with one child balanced on my hip, happy because they could see what I was doing.

'Seeing comes before words. The child looks and recognizes before it can speak,' (Berger,1972, p. 7) In the linguistic world of the classroom we tend to under estimate just how much children learn by watching others. Watching Francis's eyes tells me that she is learning much more from Jan than if I were to instruct her. It is interesting that most children recognize this in each other and facilitate the watching without feeling the need for language or being inhibited by the adult connotations of copying.

Denise joins them at the pond and she too watches Jan before finding her own tools and settling down to draw. She saw what Jan was doing and now feels she can do it too. Denise has chosen the part of the pond she wants to draw. She has looked at it closely, but seems more intent on looking at the effects her watercolor pencil marks has on the paper. She makes the marks and then looks hard at them as if to evaluate whether they are doing what she wants them to. She keeps re-evaluating and adjusting them, allowing them to flow onto and around the paper. She wants to achieve a certain look and is prepared to experiment with the medium in order to find out the best way to get that look. She is responding to the differences and similarities between how she sees the pond and how the medium portrays the pond as she sees her picture unfold before her. Watching the way she is so self absorbed in her work I do not dare intrude. Some times we need space, a sense of privacy, in order to take the risks needed to move us beyond the safe and familiar. I can see she is listening and attending to most of the conversation and comments around her. Sometimes she even raises her head to insert her own comment. Knowing that she is listening and knowing that she is in a risk taking mood I casually throw out a challenge. I suggest to the group that they might think about how one could show movement in their drawing. I give the example of the movement of the tadpoles tail wiggling. It is something we have seen and talked about when we watch the tadpoles but something never recorded, I am interested to see how children might represent movement. There is no response from any of them although I know they are all silently considering this challenge.

Denise finds a magnifying glass and alternates her time between capturing and watching the tadpoles and drawing. About twenty minutes later, when I have almost forgotten about my challenge, Robert calls me over pointing to Denise's drawing. 'Margaret, what is this, tell me what this is', he says. He recognizes that Denise has captured something unusual in her drawing and is puzzled and inquisitive. Denise carries on drawing without looking up.

I look hard at Denise's drawing and begin a few tentative suggestions as to what it initially looks like. She looks up in such surprise and I know I must be guessing wrongly. I suddenly realize that she has drawn the tadpoles moving through the water. She has taken the risk and risen to my challenge. This is a big accomplishment for Denise

'Pond study', by Denise, aged 6.2. Waterpencil. Orig. 13x13 cm.

who is wary of change and challenge. She proudly confirms that she has

drawn the tadpoles swimming. The lines she has drawn at the edges of the tadpoles are meant to be the, 'water spurting out' and she moves her hands in a motion describing this spurting. She must have noticed that as the tadpoles swam near the surface of the water their tails sent out motion waves and she had captured them beautifully using the combination of line and wash. I am happy that she did not resort to any standardized, cartoon renderings of movement. It is apparent now that she must have been studying the movements closely during the past twenty minutes and had come up with her own unique solution. I am amazed that a five year old could see a three dimensional, rapid movement and represent it so effectively in a two dimensional format. The transformation of the image that the mind has to perform in order to do this is so complex.

I ask children to draw because I want them to become more fully aware of the world in which they live. Drawing focuses their attention and helps them see and understand more clearly. 'Drawing is the discipline by which I rediscover the world ... what I have not drawn I have never really seen ... when I start drawing an ordinary thing I realize how extraordinary it is, sheer miracle: the branching of a tree, the structure of a dandelion's seed puff.' (Franck,1973, p. 6)

I try not be directive or intrusive about the kind of outcomes that occur when I help children draw. Instead I try to pose representational challenges. I challenge their perspective because I am aware that children often find an easy formula for representing an image and tend to stick to it. For example, the strip of green for grass along the bottom of the page, another blue one along the top and the sun in the corner. I try to help them see details they might have missed by talking aloud about what I see. They mimic this and again collectively create a bigger picture around a common experience. 'It is seeing which establishes our place in the surrounding world; we explain that world with words, but words can never undo the fact that we are surrounded by it. The relation between what we see and what we know is never settled.' (Berger, 1972, p. 7) I feel that it is through drawing that the discussion takes form.

I move the children around the objects they are trying to draw so that they see it from different angles. We look at other children's

drawings and discuss what they have been looking at and what it is they have done in their drawing. I will often show them how to extend and push the boundaries of the medium they are using so that the medium speaks in different ways for them. Sometimes I feel the child will allow me to work on their drawing or I will take a scrap of paper and model a technique or a tiny section of the object for them. Others close by watch and are free to try or ignore. I am aware that there many technical solutions to visual problems that children are not aware of. My role is to provide models at appropriate opportunities. Unless a technique becomes comfortable; a familiar language to us, we cannot use it to say what we want and it remains simply a technique. Children need multiple opportunities to explore the many ways a medium can be used so that they can become comfortable with it and use it intuitively. Then they are free to concentrate on what they want say.

Robert settles between Denise and Jan to draw his version of the pond. Before he begins he has a good look at what they have done. He asks questions and seems more active than they are. Their relaxed concentration is infectious and he settles down to draw. He looks, draws, evaluates and draws some more. He notices the others are able to see more clearly when they are using a magnifying glass. He finds one for himself and becomes totally absorbed in the looking and drawing process. Robert counts the eight tadpoles he has drawn, but he tells us that actually there are nine. He points to the opposite side of the pond as if the tadpole over there was not within his frame of vision. I show him how to put the wash over his drawing and then move over with my crayon and put down some marks to represent the surface plants on top of his wash. I see that Robert has only been drawing under the water and has not yet drawn any of the surface plants although I know he has seen them. Perhaps he does not know that it is possible to draw on top of his wash. Perhaps he does know but is uncertain about how to try. He copies me and adds more, then he sits back and looks at his drawing and then at the pond. He exclaims, 'Now you know that this is supposed to be that!' (this = his drawing, that = the pond) He reaches out to touch me, 'See that is that bit over there and this is this bit down here.' He almost seems surprised that he can recognize what he has done. He is checking to see

whether I also recognize.

Jan, who has been looking in a magnifying glass for a long time suddenly looks up and says, 'You know there are little white things coming out from the tail'. 'I know that,' says Robert, 'I saw that too'. He carries on drawing. I suggest to Jan that she might like to draw what she saw but she would rather carry on looking in the magnifying glass. Robert must have heard me because a while later he lifts his paper high and cries, 'Hey, Margaret, look! look!' He seems pleased with what he has drawn. He has put the clear skin flaps on the edges of the tadpole's tail and he has used a white crayon and a fine line to define the skin. It is very effective because the skin appears as transparent as in life.

The magnifying glasses have helped the children not only to see details more clearly but also to slow down and focus their eye movements so that they have been able to attend longer. Robert looks at Denise's and Jan's drawing and back at his own. He can see that his ideas and representations are unique and he knows by my responses that they are valued for this. He is inspired to carry on and add more to his

'Pond study', by Robert, aged 5.6 yrs. Water color pencil.
Original 13x13 cm.

drawing. He searches for some water beetles and draws them. He looks back and forth from his drawing to the beetles until he has captured all the details he wants. Suddenly, he remembers the ground beetle he and a friend found on the way to school and how he had turned it over so that it could crawl away. He had the opportunity to closely examine two kinds of beetles and now he tells me how they are a lot alike. He is linking the similarities between two different experiences and he is making connections and creating meaning in his learning. Soon he announces his drawing is finished, 'There I think mine is pretty good', he says confidently. He takes it to a safe place to dry and moves on to another activity.

The children's use of the magnifying glasses is similar to the work done by Zaporozhets and Elkonin (1971). Their research dealt with perceptual processes from birth to seven. They reported that children of this age had difficulty visually isolating elements in a complex form. 'The three year old explores objects and forms manually by touching, manipulating, tracing with the fingers and turning things over. The four to five year old uses both touch and visual exploration together to investigate shapes, supporting one with the other. By six years many children can systematically explore forms and objects with their eyes alone'. (from Clay, M. 'Becoming Literate: The Construction of Inner Control. 1991. p.285.) I see the children's use of the magnifying glasses perhaps being a tool they have grasped to help visually isolate objects for themselves.

<u>Looking/point of view</u>

Moira's point of view:

Francis and Moira are sitting together drawing the pond. Francis has chosen to try to depict the water as she sees it and is not very interested in what is in the water. She is busily laying down many layers of colors, and the overall effect is blue. She says, 'Water and glass, I would refer to as blue'. She must have noticed how the blue of the sky is often reflected in glass and water.

Moira is drawing the tadpoles. She has drawn three small tadpoles and three big tadpoles. 'Look at the big tadpoles', she says to the camera.

This prompts me to move over to look at her drawing because I know there are no big tadpoles in the pond. 'Looks like you have drawn most of the tadpoles', I say by way of opening the conversation. She does not respond so I point to her three small tadpoles and ask what she has drawn. 'Tadpoles', is the reply. I point to the large tadpoles and she confirms that they too are tadpoles. I look in the pond in surprise, 'Oh, are there some that are bigger than the others?' I ask. 'Did you see that in here?' Gordon is passing by and he stops to show us how big he thinks the tadpoles are. Still looking in the pond I say, 'Well that one looks bigger than this one'. Moira now understands that she has to explain what she has done, 'Well, I'm drawing this one far away (pointing to the small tadpole) and this one close up' (pointing to the big one which is also closer to her on the page). Then as if to restate her intent she shows me one that is swimming close to her, 'See that one is big'. I am clued in now and reply by pointing to another on the other side of the pool, noticing how small it looks in comparison. Gordon also realizes what she is talking about and he restates pointing, 'That one over there looks tinier than this one'. Moira has discovered, or rediscovered, the artistic device of drawing things far away much smaller than those close to you. Her mother assured me that no one at home had been discussing this concept and I know it had never been raised in school. I would like to think she discovered this way of representing objects near to her and far away by herself but I don't know for sure. It is still significant that she would consciously use this effectively in her drawing of the pond. After doing this drawing she and Francis did about ten more drawings, each of just the water. They had a wonderfully happy time for the next three quarters of an hour experimenting with colors and washes. Francis said on at least two occasions, 'I really like doing water pictures, don't you Moira?'. They would bring each picture to me and tell what kind of water effect they had been trying to achieve.

Richard's point of view:

Drawing can provide a clear indication of what children are paying attention to. Sometimes children extend their preoccupation into drawing as Gordon did with his study of proportion and size. Sometimes

the notion is worked through drawings over a period of time. Richard has

'Pond study', by Moira, aged 5.7. Water color crayon.
Original 13x13 cm.

been exploring the notion of what I call, 'point of view' or, 'framing of the image'. It is very closely related to size and proportion, in fact Richard spends many hours working on wooden models of ships and airplanes alongside Gordon at the wood work bench. However Richard's drawing preoccupations don't seem to overlap very much into his woodwork projects.

Richard enjoys observational drawing and will often choose to draw in the many settings and opportunities available in the classroom. He sees himself as a competent artist and I overheard him tell a visitor that he is good at drawing now because he knows how to put in the necks and eyebrows of people and all the things that others often don't know about. When he is working on his model making I can see how the finely tuned observational skills he has learned while drawing come in useful.

I first noticed Richard struggling with his problem when we were

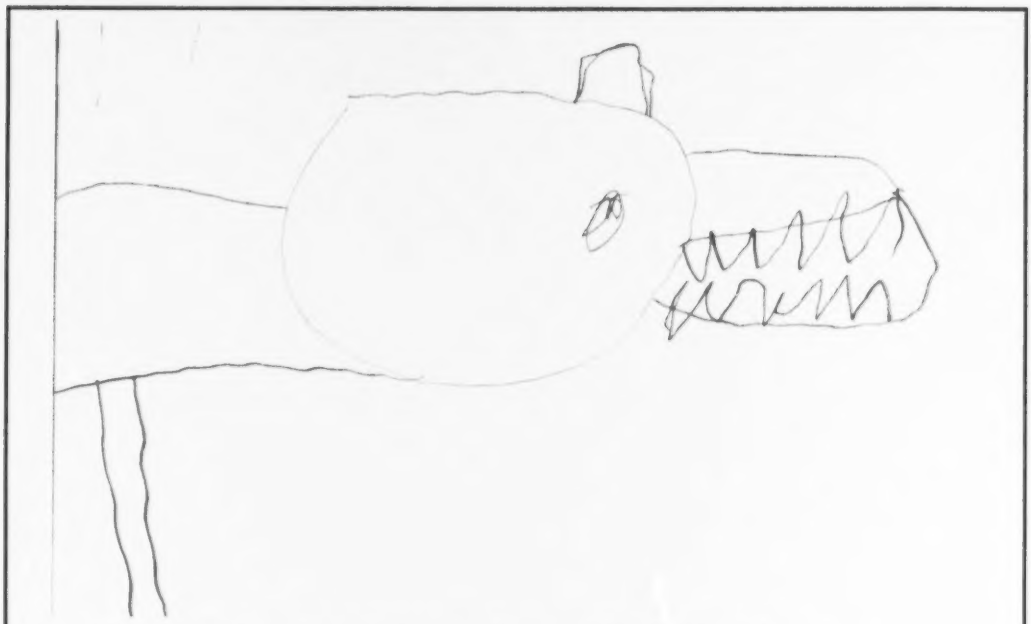
making a small book, using a big book as a model during our reading activities. He was quite frustrated because he could not manage to arrange the picture elements of the big book he was copying onto his little book page so that they would all fit in exactly the same places. He almost seemed angry with me when I suggested that his picture didn't need to be the same as the one in the book. He challenged me with, 'Well, how will I know what the words say if I don't have all of the picture in?' So we read the words again and I asked him which parts of the picture he thought might be the most important to illustrate the words. It was then that he realized that he did not need to copy the book exactly but that he was free to include only those elements he felt necessary. In the following pages of his book he explored the idea of what he could leave out and what he had to put in.

A few weeks later we were visiting the live bug exhibit at the museum. As usual we drew many of the things we saw. Richard was able to take the concept of, 'what information does the viewer need to know' and apply it to these drawings. When he had finished his drawing of the giant spider he brought it to me saying, 'I also drew the food it ate and what it's house looked like because that's important information about the spider'. He had managed to take an already abstract and complex concept about what a viewer needs to know in order for a drawing to make sense and apply it to a very different kind of situation. He had a sense of congruence between what he wanted to say and what information the viewer might need.

He had finished drawing before the others and asked if he could go into the room next door and draw his favorite dinosaur. When I went to collect Richard later I was surprised to find that he had extended the concept of, 'what information does the viewer need to see', into the realm of more artistic solutions. Faced with the problem of sitting right in front of a very large dinosaur that stretched the length of the room and having a piece of paper sized 14x20 cm he had decided to focus on the most important piece of the dinosaur for him, the head, and leave the rest of the dinosaur off the page. It is very unusual to see young children do this. Usually they will scale things down or distort the proportion in order to fit the images on the page.

I noticed Richard's interesting use of point of view when we were drawing pictures of our quail eggs hatching. I had taken the egg that was just piping out of the incubator for them to see more clearly and he had chosen to capture this in a drawing. He drew my hand with the quail egg sitting in the palm, my arm and body extending off the page. (see pg 71).

Another time when we were doing drawings of our pond studies,



'Dinosaur', by Richard, aged 5.6. Graphite. Original 20x28 cm.

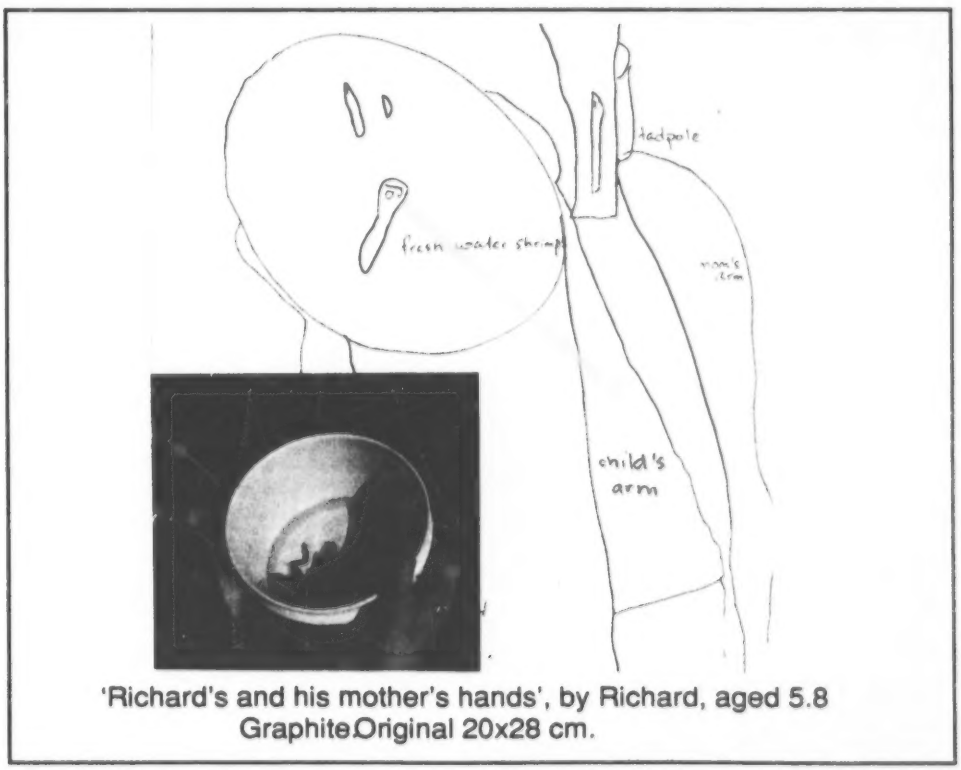
he drew a very interesting perspective of a pail with pond specimens in it. He drew it as if the viewer were able to stand where he had been standing but he framed the picture so that we only saw the pail and it's contents and the hands that were holding it. This time he also wanted to include information about his mother's help on the field visit. Rather than do another picture, he fitted the information about his mother putting the specimens in a small jar by drawing his mother's hands and arms beside his from the same perspective.

These examples help me see the development of a concept as being unitary rather than antagonistic. Richard is adding on, in a fairly systematic way, new and dynamic principles for framing what he wants

'Egg on hand', by Richard, aged 5.6.
Felt pen. Original 8x8 cm.

the viewer to pay attention to.

Richard and Moira are both, in their own way, creating and recreating the world as they see it. Alexander (1984) tells us that there



'Richard's and his mother's hands', by Richard, aged 5.8
Graphite.Original 20x28 cm.

is much to be valued in this process:

'The moment of creation is probably the only time children's culture is validated. It is an expression of who children are way, way down in the most important part of themselves. It is a time when children do not have to worry or fret about being accepted. Children can be who they want to be fully. The child is in control of the moment. They do not have to ask anyone how they should express their point of view. When children are deeply involved in and concentrating on the discipline of creation at the moment of creation, they are communicating their point of view.' (p. 478)

Drawing as a way of embedding experience

The children have shown me their primary ways of knowing; through their senses. I have watched how they have touched, looked, listened, smelled and moved their way through each experience so that it has become a part of them. They have taken the experience in through their senses and physically made it part of themselves. Their knowing is now very much a part of who they are. They have integrated the mental, physical, emotional and sensory components of an experience so that their understanding is more complete. When their understanding and knowing is more completely part of who they are it facilitates the acquisition of new experiences and ideas. We know that young children need to have first hand concrete experiences in order to make sense of the world in which they live (Katz and Chard, 1989). However I sense that we in education often misunderstand what a first hand experience looks like for the child. Some first hand experiences may offer more possibilities for the child than others. For example; the activity of representing some of the pond life through observational drawing may be of more value and relevance for the child than coloring in a mimeograph of a pond. The problem of recognizing meaningful first hand experiences for children is compounded when we have an education system which places very little value on children's life experiences and a huge amount of value on disembedded thinking (Donaldson, M. 1978). So that even in the primary grades, teaching and learning within the classroom is comprised largely of decontextualised knowledge. There

is a strong reliance on second hand information or book knowledge. Watson and Johnson-Laird report that even university undergraduates find problem solving easier when it is embodied within a real task; when the learning is embedded. An education system that exclusively promotes disembedded thinking runs the risk of setting up an 'apartheid'. Alfred North Whitehead suggests that, 'in teaching you will come to grief as soon as you forget that your pupils have bodies', he added, 'It is a moot point whether the human hand created the human brain, or the brain created the hand. Certainly the connection is intimate and reciprocal' (cited in Donaldson, 1978). When I see children drawing from life I see the connection between the hand and the brain. The eye sees a three dimensional object and has to translate it into a two dimensional form. The eye sees several three dimensional objects and has to choose which ones to draw and where to place them on the page. A child remembers an event or a story and has to decide which images will most accurately describe them. The eye, the brain and the hand have to work together to produce a visual image. The act of drawing helps to embed the experience, or make it more concrete for the child. At the same time drawing has the potential to move the child towards a having a product which can be more or less disembedded. The picture can stand alone out of context or be shifted to a different context. The child has to have first hand experience before being able to move beyond to a more abstract level of disembedded thinking. In order to manipulate only the thought, it first has to be disembedded. In drawing, once the child has represented an understanding in a hard copy form, the drawing, they have something explicit and outside of themselves that they can step back from and recognize, evaluate and revise if need be. If drawing is viewed as a language then I see the externalization of a thought or an idea through a drawing fulfilling a similar function to that which Vygotsky refers, when words create the distantiation needed for the metacognitive processes that move children to higher levels of thinking. (Vygotsky,L. S., 1962)

Having some visible evidence of their own thought process through producing a drawing helps children become conscious of their actions. They become more self aware. As Vygotsky (1962) points out

control of a function is the counterpart of one's consciousness of it. Observational drawing demands that children control and direct their own thinking in order to produce a likeness that will be recognizable by others. They have to choose which features they must include and which they can leave out in order best to describe those features they want others to see. It is this choosing that is critical in the process of moving the child beyond the egocentric, action and reaction. To choose, one must be conscious of one's actions. To be conscious of one's actions and their implications in drawing requires the child to be aware of the audience. Having to stop and think is often difficult for young children, but when it is done within the context of drawing, when it is done within a meaningful context and for a purpose, then it becomes more possible for children to consciously control their efforts. The lasting nature of a drawn image allows time for reflection upon the action. The public nature possible with a drawing allows an opportunity for many people to review the representation and explore other points of view.

The child's intention when drawing is not always to make cognitive meaning. Often there is an overlay of many ideas, interactions with the medium, feelings, simplifications, essences and hypotheses. When we look at drawing only as a way to understand the child's intellectual appreciation of the world, as an 'accurate observation' then we miss much. Wellman (1990) states that children display a diversity of representational skills and competencies rather than a uniform acquisition of a single conceptual structure. 'The correspondence between mental representation and an aspect of reality is a complex achievement that undergoes significant transformations that eventually yield an understanding of mind as an interpretive and constructive ability'. (p. 17).

I visited Robert's home to share some of my video tapes with his mom, Sheila, and talk about Robert's drawing. I was impressed by the careful way she had saved his drawings and grouped them into chronological folders of those done during the school year and those done at home. She carefully dated them and often had comments on the back to remind her of the context or comments that had been made at the time.

As we looked through his drawings we could see patterns emerge. At home Robert's drawings were mostly about the stories he was being read or conversations he was part of. Sheila told me how they had read the 'Boxcar Children' series together every night. These are chapter books with no pictures to follow. While she read Robert would sit beside her on the bed and draw. The drawings were about the stories as he heard them. When she read him Greek mythology she found pictures of how he thought the characters in the story might look. He remembered many details from the story descriptions. The story of Trojan horse inspired him to do a picture of what the huge horse might look like and how the people would fit inside. Robert was using drawing as a way of making the story experience meaningful. It helped him to pin down or embed ideas. He can show these representations to others and say, 'Is this the way it was?' One day after hearing a discussion about the Spanish fishermen using nets within other nets to catch smaller fish, and getting his father to describe how they would do this, he drew his interpretation of the nets and brought it to his father for confirmation.

Drawing seems to be Robert's way of confirming his visual images. When the images are out on paper he can show them to others and check his own perception and representation. Robert is encouraged to draw at home and to talk about his drawings. Sheila tries to capture many of the stories that go with the drawing because she feels that when Robert tells her about what he has drawn she more clearly sees what his intention was and how the drawing fits into the wider picture of who Robert is and what he is thinking about. She finds the drawings a useful way of communicating and discussing abstract ideas with Robert. She values his drawings not just by saving them but also by displaying them in their dining room and using them as conversation pieces with the family.

Robert's school folders tended to contain mostly observational drawing. Sheila did not always know the context for the drawing and often did not get the story that went with it. She really appreciated it when the staff wrote an explanation to go with the drawing or even labeled some of the parts in it. However she still perceived his school drawings as being less substantial than his home drawings. I sensed

that because she was not always aware of the context of his school drawings she was not able to value them as much. She had missed seeing the thoughtful process and the effort that had gone into them. However she is a wise mother, and was able to treat both his school and home drawings with equal respect.

As a teacher I found this revelation quite alarming and wondered how many other children's masterpieces go home to be misunderstood or undervalued. How can I as a teacher help parents know about their child's drawing processes?

Talking

As the children look at the insects and plants in the pond in the classroom they talk about and describe what they see. As they talk another layer of the drawing process is being drawn back to reveal an important clue. It has been difficult for me to think about talking within the context of drawing, because the children don't talk much while they are drawing as there seems to be no place for it.

I remember, about six years ago, the first time I set up a pond in my classroom. The children were just as interested in it then, as they are now. They gathered around in the same way and looked and talked. I joined them and together we discussed some of the things we saw. We searched reference books to name insects and to find out more about them. I noticed then that the children were not always able to stop long enough to see all the fine details needed to classify the insects. Some children were only passers by with a superficial interest. I added magnifying glasses hoping they would help them focus and see better. More children stayed to search for tiny insects to enlarge and they stayed for a longer period of time. The window of the magnifying glass held their eye still so that the insect was not only bigger and easier to see but it was also held in view for longer. However the children still had a tendency to over generalize their observations so that if they saw a brown beetle and had classified it as a diving beetle then all other brown beetles tended to be diving beetles too. They did not seem to notice fine details such as whether or not a water boatman had two legs

much longer than the others or indeed which legs were longer. As each child looked into their own individual magnifying glasses it became harder to have a shared vision and to compare and contrast the insects for the tiny differences as a group and to share our combined observations and understanding. Although there were drawing materials close at hand the children did not use them. It was then that I realized I had to make my expectations clearer so I started to ask the children to draw what they saw. I was hoping for two things. The first was a representation that we could all have access to for discussion, the second was that the drawing process would help the children see more details. Asking the children to draw was not enough. Many were very reluctant and needed much reassurance and support to produce any drawings, let alone drawings we could share. I was surprised that children newly arrived in school should already believe they were not competent at drawing. It was during this time and since that I have endeavored to find a way to talk with children about their drawing. I want to talk in such a way that drawing becomes their own and something they can use as a tool for understanding just as they might use talking and later writing.

In 'Constructing Knowledge Together', by Gordon Wells (1993), a teacher describes her reflections on her own practice, through action research, in relation to children's understanding of revision in their writing. She comes to realize that she actually avoids the use of the word 'revision' in her conversations with the children and that they have a very hard time defining it for her and for themselves. When she makes changes in the way she speaks to the children about revision and as they are given the language to discuss it, not only does the children's ability to describe revision change but they were also much more able to revise for themselves and discuss the process with others.

One of the reasons art might be so inaccessible is perhaps the difficulty we have when we want to talk about a visual image. When we use language the words are strung out in linear fashion. It is not until one reads to the end of the string of words that the meaning becomes apparent. However when we look at a picture the eye takes in multiple messages simultaneously and we have the choice of focusing on one part rather than another yet we retain the meaning of the whole. Pictures

have multiple meanings. Selecting which one of these meanings we will talk about and how we will talk about it can be difficult. Yet when we do we are rewarded with the knowledge of being able to share our experience and understanding with another and having our intuition confirmed through a common language.

Donaldson (1978) reported significant differences in children's performance on experimental tasks where the researcher made sure that the children fully understood what was being asked of them. Similarly Vygotsky(1962) suggested that the process of giving language to actions helps children control those actions. For the past five years I have become increasingly aware of my efforts to find different ways and times to talk with children regarding their drawing. I am looking for ways of talking that will support and extend the usefulness of the drawing act in their cognitive processes.

When my focus is on the talk around the drawing process, as it is in this section, then the cognitive aspects of drawing more easily come into view. I am looking for ways to open up possibilities for children to use the medium in a variety of ways to achieve effects that better describe their message. I am also looking for ways to let the children know that there are options available to them that express different points of view and that they may consciously select the best option for a specific situation. I want them to become aware that as they make choices in their use of medium and point of view these choices affect the way the viewer sees what is being presented to them. The choices of medium and point of view also affect the artist's deeper understanding of what it is they are drawing.

Drawing Around The Pond

As I become involved with a small group seriously engaged in drawing the pond insects I begin to see how talking affects what they are doing. Amanda has been looking intently at the insects in the pond and now she takes a drawing board and settles herself on the floor beside it to draw what she has seen. Her best friend Philip has followed her. He watches and copies what she is doing. Without looking up from her work she is aware he is there and says encouragingly, 'I'm drawing

the little black bugs I see'. After looking at her drawing and then again in the pond Philip settles beside her and announces, 'I'm drawing some bugs I see too'. And instead of drawing their house or pet or themselves they do indeed begin to draw what they have said they will. They draw carefully and with great concentration and purpose. They are recording what they have seen. Dave also settles to draw beside the pond and I join him. I ask him what he is doing. He says, 'I'm drawing one of the bugs I saw in there'. He too states his clear intention, this is not a random, messing around with the medium, the kind of art event that often happens in more free classroom art activities.

I notice that Amanda has smudged her beetle drawing. I sense she is on the verge of rejecting the drawing because of this, because it does not match her intention, and I step in to suggest that sometimes a smudge makes the form look as though it is moving. She has noticed the bugs moving around in the water, so because my suggestion makes sense to her, and it closely matches her experience, she accepts it and confirms, 'Yup, it's moving'. Philip looks over at her drawing and appears to be listening. Perhaps this is a suggestion he will follow too or perhaps it will be something he stores in his memory for another occasion. I continue to watch and comment on Amanda's drawing, 'I notice you have put your legs (the bugs) coming from the bottom of your bug - look, Dave has put his legs all around so it looks as if you are looking from above.' I say this because I wanted them to become aware of other points of view when representing. Dave and Amanda glance at each other's work and then carry on putting the details on their bugs. I notice another detail in Amanda's drawing, 'These look like little antennae up at the front'. 'Yup, these are its two antennae and that's its tongue', she says, pointing to the small mouth part she has just drawn. I was curious to know whether she had seen the tongue or if this was something she assumed the bug would have, so I ask her if she saw its tongue come out. 'Yeah, I did', she says. I wondered what it was eating and she tells me that it licked the water. I have watched the bugs swimming in the pond and have noticed that they do indeed look as if they are licking the water as they swim. Philip has been listening to our conversation and looking at what Amanda has been drawing. I notice that

he too begins to work on the details around the head of his bug. His shows me that he has become more aware of the representational possibilities available to him to describe the bug's head in more detail.

'Children are more likely to assimilate language used by adults when what they say matches children's interests. Words that are out of context or not in harmony with children's current schematic concerns and interests are less likely to be meaningful for children.' (Nutbrown, C. 1994, p.43)

Dave sits back on his heels and looks hard at the three bugs he has drawn. It is an evaluative looking, as if he is looking for the effect he has tried to create. I wonder if he is thinking more about the perspective that we had commented on earlier. He has drawn his three bugs from slightly different perspectives as well as making them look quite

'Pond study', by Amanda, aged 4.8. Charcoal and pencil crayon. Original 20x20 cm.

different shapes, sizes and colors. But he has retained his aerial perspective. Suddenly he announces to himself, 'Bugs are all different'. He has made a connection between the differences in the bugs he has drawn and the differences in real life bugs he has seen. It is like a revelation to him.

I notice Amanda has started to represent the water of the pond. She starts purposefully at the bottom of the page and is working her way with broad crayon strokes up towards the bug. Suddenly Philip kneels up, points to the head part of the bug he has been working on, and announces emphatically, 'That's its tongue sticking out there'. Like Dave he has just acquired a new representational skill and a deeper understanding of what a water beetle is like. 'Oh! Is it eating something too?' I ask. 'Yes, it was eating something', he replies, adding, 'It was a kind of a plant'. 'Oh, a plant in the water - you saw it doing that, did you?' I ask. He nods. Dave gets up to check in the pond for himself. 'There's some sort of leaves and stuff in there', he tells us, almost as if this was the first time he had noticed them. But he is also supporting Philip's hypothesis. As he sits down again he notices that Amanda is drawing the water. 'I want to make the water too', he says and starts to copy her, beginning at the bottom of the page and moving his pencil in the same way. I don't want him to just copy her without being aware of what he is doing. Sometimes children copy actions and movements without being fully aware of what these actions are doing or how best to utilize them for their own personal needs. So I talk about what I see Amanda doing. 'Amanda's bug looks like it is just on top of the water', I say. 'In fact it almost looks as if it is jumping out of the water'. I am talking about the space between the water she has drawn and the position of the bugs above it in which she did not notice the space. Being aware of spaces in drawing is as important as being aware of the marks. Dave looks up and agrees, 'Yes, 'cause some bugs are jumping bugs'. In fact the bugs in the pond did not jump so he is matching his previous knowledge of other bugs with what I am suggesting. I point to Dave's bugs in his drawing. They are still very far away from the water he is working on, and I tell him that I think his bugs, 'look like they have jumped right out of the water'. 'There isn't any water touching any of

them', I say. As I talk, Dave becomes aware that in order to have the bugs look like they are actually in the water and for him to retain his aerial perspective, he will have take his pencil marks all around his bugs to give the appearance of being surrounded by water. He announces this intention and I confirm it for him by describing what he is doing. Amanda and Philip stop their drawing to watch Dave take the pencil marks over and around his bugs. Amanda notices different colors in the water, so does Philip, and together they select colors to use and add them to the water marks. Then she draws a dark line along the bottom of her page to represent the bottom of the pond. I comment on what she has done and she smiles, pleased that I have noticed, and gets up to look in the pond again just to make sure she has all the information she needs to replicate the pond bottom. She is retaining her cross sectional perspective and following all the pictorial rules that this entails.

I want to maintain Philip's interest and motivate him to add more to his picture. I ask him what he is adding to his bugs now. 'Antennae', he says, remembering what Amanda had added. I point to the large section of his bug next to it's head that he has just drawn and ask him which part of the bug it is. 'That's the bottom', he grins. I am glad he has added a body to the head without being prompted. I wonder if he had noticed that he had not defined the body of the bug, but had noticed Dave's. His rendering of the body was very similar to Dave's. He seems pleased that I am noticing his drawing.

Dave pushes his drawing close for me to see. He waits expectantly for my comments. 'I see you've made some of your bugs bigger. Did you do that so we could see the bugs more clearly?' I ask. 'Well some', he answers briefly. He seems reluctant to talk more. Perhaps this was not his intention, but he does not know how to tell me what it was. My question sparks an idea and he takes fresh paper to begin a new drawing. He begins it by drawing a very enlarged bug.

Philip sits back and surveys his and Amanda's drawings. He is looking at the antennae he has just drawn and comparing them with Amanda's renderings. He shakes his head all around as if he has large imaginary antennae saying, 'wiggly antennae!'. I can see he is remembering our conversation around the pond about antennae and the other antennae

'Pond study', by Dave, aged 5.4 yrs. Pencil crayon. Orig. 20x20 cm.

he knows. He is combining his drawing knowledge with his previous experiences so that his concept of antennae becomes richer and more complete. His understanding is both personalized and socialized.

I see in his understanding of the concept of antenna the notion that Vygotsky presents in his discussion of the development of concepts or word meanings, '... [concept development] presupposes the development of many intellectual functions: deliberate attention, logical memory, abstraction, the ability to compare and to differentiate'. I see here too the relationship between the spontaneous and non spontaneous thought process in the child being, as Vygotsky argues, unitary rather than antagonistic as Piaget suggests (Vygotsky, 1962). I see the process of drawing the antennae, within the context of the experience of the pond, and in relation to the children's past experiences, as assisting in the unitary aspect of the formation of the concept of antennae.

As I focus on the talk that surrounds children drawing I also cannot help but become aware of how little talk there really is, despite my efforts to elicit talk. There are many spaces around the talking and

as I watch the children draw, these spaces become rich with information. Spurling (1977) speaks of these silences. 'The movement from

'Pond study', bt Philip, aged 4.8. Pencil crayon. Orig. 20x20 cm.

silence to speech is not a movement from nothing to something, from non-meaning to meaning. The silence that precedes and surrounds speech is not void, but a silence with a promise of speech, a silence pregnant with meaning, like a pause in a conversation, or a gap between each ring of the telephone. Speech is a progression into a linguistic meaning, from the more primitive field structure of experience, which is itself already a primordial level of significance with a potential for more complex layers of meaning to be constructed on top of it' (p. 51). It is the construction of these layers of meaning that I am most interested in pursuing in my teaching.

Talking is the tool of the teacher; we use it to ask questions, give directions, discuss, prompt, tell, lecture. It is something we tend do to

others. 'I will talk to him', I say, as if I have the right to impose my words. Often talk is an unsolicited gesture. Teachers talk to the class, believing they have something important to give them. The class does not talk to the teacher. We invite children to tell us about their experiences but somehow the telling seems to be all in one direction. We often listen to children as token gestures and move quickly on anxious to impart our superior knowledge, or we steer children to say what most closely matches our expectation. I have heard teachers exclaim in exasperation of a particularly willful or argumentative child, 'She just won't take a telling!', or in another situation when a child is not conforming, 'She needs a good talking to!'. Talk is powerful. The linguistic balance between myself and the child is already uneven, I must use language carefully and sensitively. I must think before I speak. I must ask myself why I am compelled to speak. How will my language define this child's reality? Am I respectfully aware of who this child is; who they want to become? Am I mindful of the spaces and the hidden messages in my language that children seem to see as clearly as the words?

The educational leader behind the Reggio Emilia preschools in Italy, Loris Malaguzzi, was very aware of the limitations of words. He saw one of the great challenges of education as that of, 'giving back to language words which it needs and can use, which can be silent and listen, which can fill communication, which can change and generate ideas, which can discover its great creative potential, which can give form to and discover paths of socialization, of inter-subjectivity and inter-objectivity.' (cited in the catalogue for, The Hundred Languages Of Children, p. 23)

It seemed that encouraging children in my classroom to converse thoughtfully around and about their drawing enabled them to clarify their understanding of what they and others had done and why. Through talking about what they had done they also became more aware of how their drawings might be seen by others. Having others talk about their intentions enabled them to see as others might. As they gave language to their work they sometimes seemed surprised by their own revelations about their own work.

Lilian Katz (1993) suggests that, 'when the content of teachers relationships with children focus on the work itself, rather than mainly on routines or the children's performance on academic tasks [then]... adults' and children's minds meet on matters of interest to both of them. ... The children's roles in the relationships were more as apprentices than as targets of instruction or objects of praise. ... the content of the teacher-child relationship is rich with problem setting and problem solving. The work of projects provides ample texts, pretexts and contexts for genuine conversation between the adults and the children, as well as among them.' (cited in, Edwards, C.P. Gandini, L. and Forman, G. 1993, p. 29).

Chapter 4

THE QUAIL PROJECT

South of my house, across the river and along many dirt roads, a woman and her adult son live on a lovely old farm. Together they breed and raise game birds for sale in local markets and restaurants. For several years now she has given me a few quail eggs to incubate in the classroom. She tells me that she remembers her delight when each spring tiny fluffy chicks hatched on her grandparents' farm. As a child she was always given one or two of her own to raise. Now she wants to pass this pleasure on to others and so she gives quail eggs to classrooms and children enjoy the marvels of chicks hatching and growing. The eggs are small and pretty; a pale turquoise with brown speckles and blotches. They only take fourteen days to incubate. Quail chicks look like tiny fluffy bumble bees when they hatch and are not much bigger. Although they look so delicate they are in fact very hardy and have a good hatching and survival rate. The process of incubation, hatching and growing is a fascinating one and the children need no encouragement to become fully involved. Each day the children notice something different about the chicks. They grow fast, their feathers changing daily into their beautiful adult plumage without ever seeming to go through the ugly scraggy stage that chickens do. They don't grow as big as chickens and they don't get as messy or smelly. In six weeks the chicks are full grown and will start laying if the conditions are right. A full grown quail is only the size of my two fists squeezed tight together.

Combining Drawing With Writing

Many of the older children had experienced our quail hatching last year and remembered quite a lot about them. We had spent many hours around the cage observing, measuring, drawing and discussing quail. This year I wanted to extend my expectations of these children, I was particularly interested to see what would happen if I encouraged them to add more writing to their drawings. They were already very inter-

ested in writing and wrote often in the many contexts of the classroom and at home.

I have become aware, through collaborative planning with other teachers, that I sometimes unconsciously impose limitations on what I feel children are capable of. This may especially be the case when I repeat the study of a topic. I remember all the things the last group could and could not do and risk imposing the same restrictions on the next group, despite the fact that I know they are a completely different group of children. It feels more comfortable for me to take the same path as before than to think of what I might do differently.

We teach as a team in our Centre and one of the joys of teaching as part of a team of teachers is that we constantly challenge each other's perceptions about what we are doing and why we are doing it. If it is difficult for me to change my perception of what I am doing, then it is even more difficult to change the actual behavior that is conveying my expectations to the children. When I work as part of a team I receive the support and the ongoing feedback necessary for making changes.

I was fortunate at this time to have a very experienced grade one teacher, Susan, work alongside me for part of each day. We work well together. As a grade one teacher Susan has had many years of guiding, modeling and expecting children to read and write. She is a very accomplished and sensitive teacher and she found the many, in-depth projects we undertook with the children ideal for integrating reading and writing in meaningful contexts. One of the writing activities she initiated was to make individual books for each of the older children and have them keep a diary of their observations of the quail. She made the books with only four or five pages, each page was divided so that the top two thirds was blank and the bottom third lined for writing. The children's first task was to design the cover for the book. As the children worked on the covers she talked about some of the things that might go inside the book. Her expectation was that the book would be a record, using drawings and words, of the chicks' growth and development. Before starting work on the first page Susan and the children examined the incubator with the eggs inside and discussed when and how the quail might hatch and what they might look like. As I listened

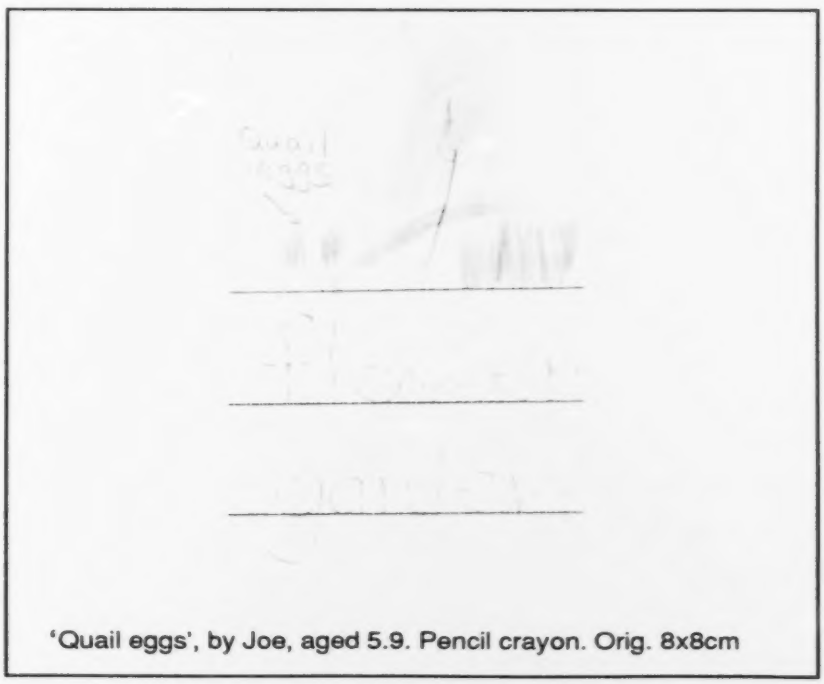
to Susan's interactions with the children I noticed that the kind of language she was using and the points she was emphasizing were different from the way I had talked last year and how I would have talked had my primary focus been observational drawing. When Susan talked about the incubator she talked about its purpose and how the eggs were in there to keep them warm and moist. She talked about the size of the word incubator and other words they might want to use to describe what they had seen. She started to write out several words on cards and emphasized the sounds of the words saying them several times slowly. This approach stood in contrast to the way I had talked about the incubator. I had tended to talk about the shape and size of the incubator. I noticed the windows in the top, the eggs inside and the lever that regulated the temperature, all the things that might go into a drawing. Back at the table where the drawing and writing was to take place the children immediately began to draw what they had seen.

The Diaries:

'Incubator', by Richard, aged 5.8. Pencil crayon. 8x8 cm.

Richard struggled with his usual problem of space. He began by drawing the eggs first then discovered that he did not have enough room on the page to fit the incubator around them. He was also frustrated because he did not have enough room to fit both observation windows of the incubator on the page and had to be content with one. He did however manage to show the four eggs that were visible through the window and shifted his focus to the color and pattern of the eggs. He put so much time and effort into solving his space, size and color problems he would only agree to write one word, 'incubator'.

Joe, who had not hatched quail with us last year, did not know how to begin and instead drew some sunflowers that he already knew how to draw. Susan moved beside him and admired his sunflowers, she reminded him that this book was about quail eggs hatching and he might want to think about how he could put that in his picture. He drew four quail eggs next to his sunflower with the same green crayon he was using to draw the grass. Never having seen an incubator before he was at a loss as to how to draw it. He chose to write the words, 'flower garden' under his picture. Susan asked if she could label his drawing with the words, 'quail eggs'.



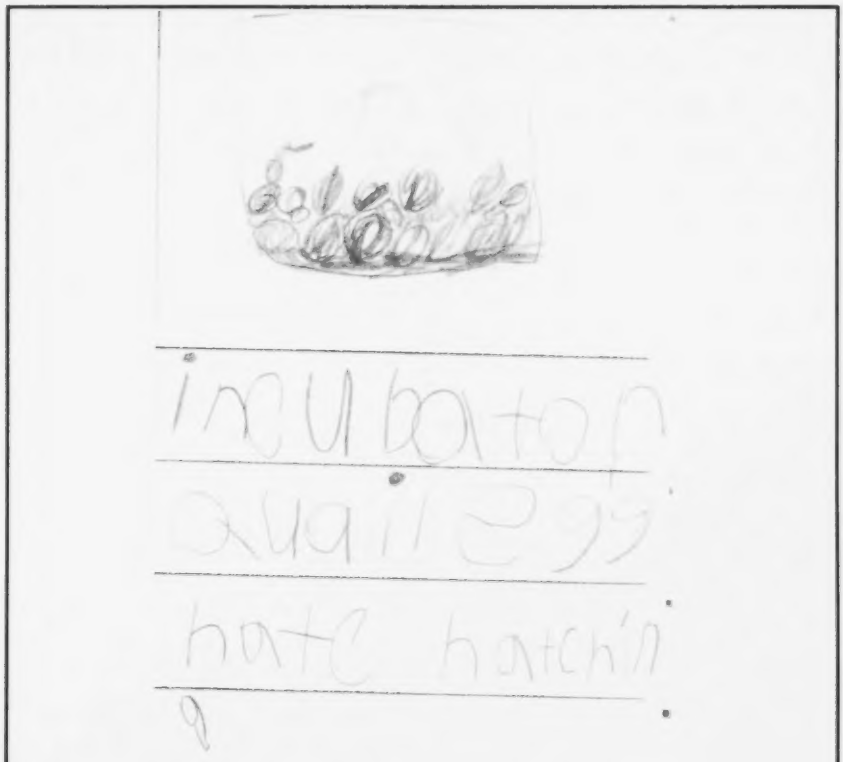
'Quail eggs', by Joe, aged 5.9. Pencil crayon. Orig. 8x8cm

Jan, in her usual way, noticed many details and was able to remember them in her drawing. She had noticed that the incubator had two viewing windows and that four eggs were visible in each. She noticed that the eggs were held in cup shaped rockers to keep them gently moving. She plugged the incubator into a wall switch to show it was heated with power although the little heater and fan were not visible. She also colored all around it to show it was sitting in a quiet place in the room so that the children would not bump it. Jan was keen to write as many words as she could and carefully crossed out each word on her copy card as she wrote it in her book. That way she said she would remember which words she had written.

'Incubator', by Jan, aged 5.10. Pencil crayon. Original 10x10 cm.

Beth remembered more about the quail last year than this year. She drew the inside of the incubator with one quail coming out of the egg. She drew the eggs out of the rocker and set on a piece of soft red blanket. This is exactly what happened last year when the eggs started to hatch. I had to take them out of the rocker and because I was worried

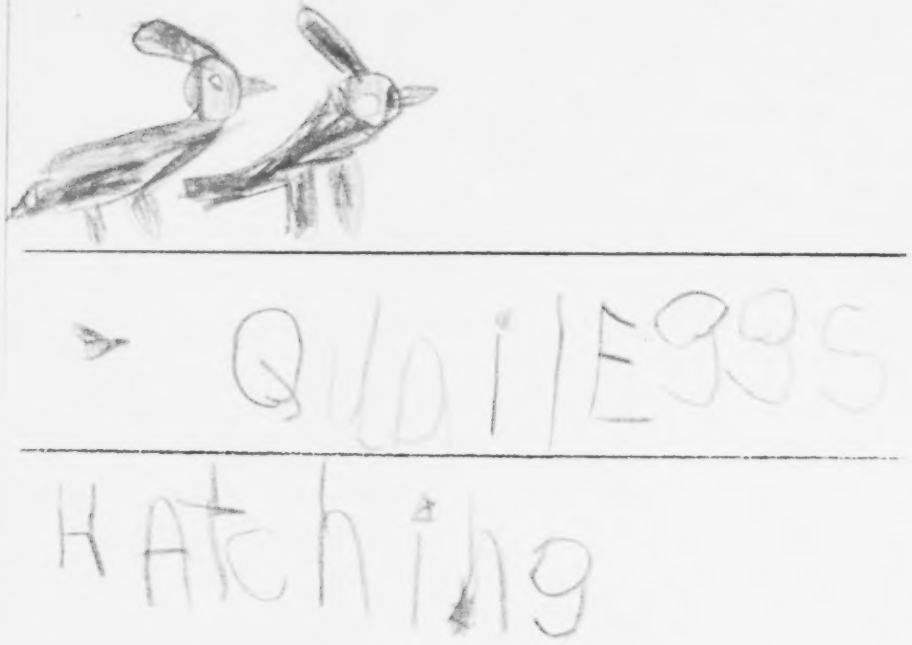
that their tiny legs would get stuck in between the wires on the bottom of the incubator I had lined it with soft red flannel. She even drew the egg tooth we had discovered on the chicks when they first hatch. She chose to do a lot of writing too. She wrote, 'incubator', then wanted to add, 'quail eggs hatching'. She did not use Jan's strategy of crossing out each word as she wrote it so she started to write 'hatching', forgot where she was and then started the whole word over again. She did not notice her double word when she read her sentence to me.



'Incubator', by Beth, aged 5.7. Pencil crayon. Orig. 10x10 cm

Robert remembered the story we had read about quail and the illustrations that showed the quail with crests on their heads. None of our quail have ever had crests but that was the image he had remembered. He remembered that much of the talk around the incubator had been about the quail hatching, not about them incubating. He drew the mom

and dad with the two quail eggs, one just hatching. Robert is very interested in writing just now and was keen to write as much as he could and do it well. He wrote, 'quail eggs hatching'.



'Hatching', by Robert, aged 5.11. Felt pen. Orig. 10x10cm.

Francis is very interested in writing, especially sounding out her own words. She was very puzzled to see a 't' in the middle of the word hatching. She sat and said, 'hatching', quietly to herself several times, then crossed out the 't' she had written from copying the word card. (picture on p. 94)

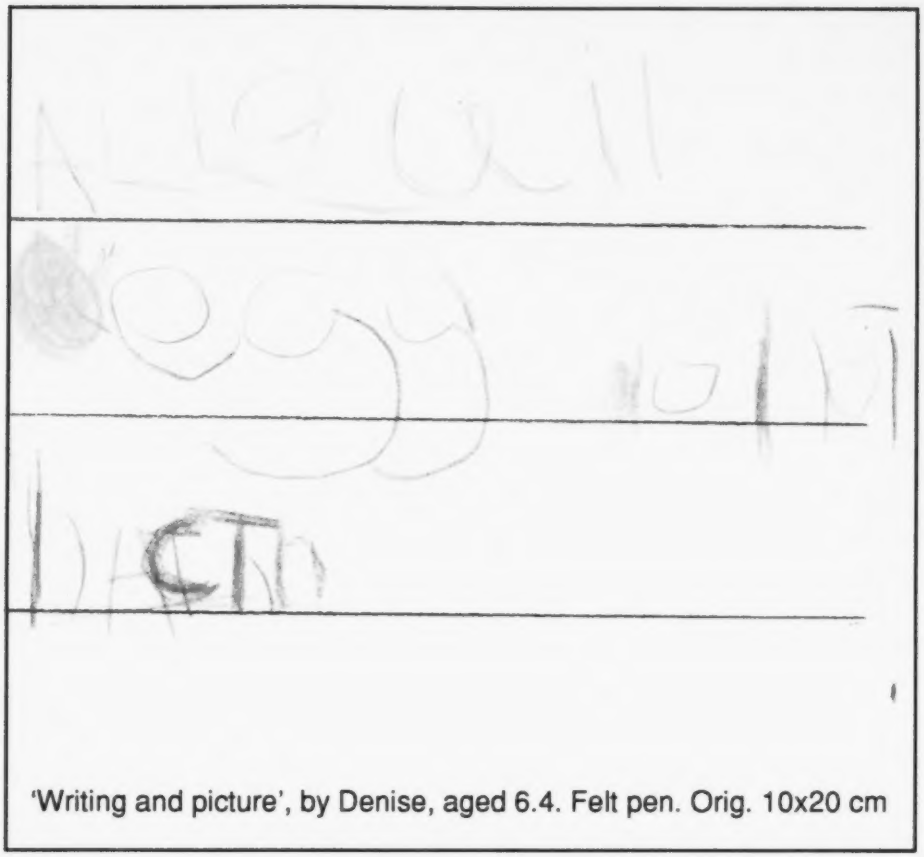
Denise writes a lot. Sometimes she will sit and do a whole page of writing. She does not usually combine her writing with her pictures. She is also one of my keen artists who spends as much time as she can drawing. Denise started with a picture of the egg and quickly moved on to the writing which she seemed more interested in. However when her writing was done she went back and covered it with a felt pen. She said she did not want writing with her picture and so she turned over the page

'Hatching', by Francis, aged 5.8. Pencil crayon. Orig. 10x10 cm.

and wrote a long sentence with no picture. She wanted to write, 'sometimes all quail eggs do not hatch'. She remembered that some of the eggs last year did not hatch. She was quite upset about it at the time. Half way through writing she decided that the, 'sometimes' was not right. She wanted to be more emphatic and so changed it to read, 'ALL quail eggs do not hatch'. She is aware that when you use uppercase it makes the word more emphatic. Like Francis, she sounds out a lot of words she writes and she too found the 't' in the word hatching troublesome.

(picture and writing on p. 95)

Gordon was in the middle of a very complex woodwork project and did not want to join us. He promised to work on his book later.



'Writing and picture', by Denise, aged 6.4. Felt pen. Orig. 10x20 cm

Each child brought something special about their own perception of incubation to the task. They all loved working on their quail diaries. As I looked at each child's drawing I could add another piece into the puzzle of who they were and where they were going.

Does Writing Carry the Message?

On the appointed day the quail started to hatch and I took the two eggs that were pipping out of the incubator briefly for the children to have a closer look. We talked about what was happening. They noticed that the eggs were cracked and that the beak poking through had an egg tooth on it. They noticed that the feathers of the chicks inside were wet and that the shell had a white lining. This was a big event and the children were very excited at the thought of having real live chicks in the classroom.

It was Jan's entry in her diary that day that alerted me to a subtle change that was taking place in the children's use of drawing. Usually Jan does very detailed drawings, spending a great deal of time and care over them. I expected to see some of the things we had talked about and noticed. However, on this page she did a very quick sketch of two eggs, using arbitrary colors, and moved quickly on to the writing. She chose to say, 'two quail are hatching'. (her pages sequence from right to left) She was not able to fit two whole words into the line and so crossed them out and started again. It is obvious that on this page she was much more interested in writing than drawing. When I watched Dave, Robert and Scott work on their pages the pattern was the same; a fast sketch and on to the writing. They put a lot of thought into what they were going to say and spent a long time writing. They were very keen to write as neatly as possible. Denise didn't even attempt a drawing. She just launched straight into the writing.

Dave, Robert and Scott - writing with drawing samples from their diaries.

Richard again worked away at his preoccupation with point of view and delighted me with a drawing of my hand, the egg laying in the palm. It is the same right hand that I held the egg in. Francis, who was sitting next to him decided to try this point of view too and was very pleased with her result. Neither of them put any effort into writing. For both of them it was an unnecessary chore they did as quickly as possible and not very neatly.

'Egg in the hand drawings by Richard and Francis. Originals 8x8 cm.

Beth had real problems with the diary. She is a very accomplished artist and loves to express herself through drawing. She could not settle to draw or write and was very disruptive in her group. She eventually did a half hearted and very scribbly rendering of an egg and then looked at me defiantly. I moved next to her to talk about her drawing and she

lapsed into baby talk. Beth has not done this for a very long time. Last year it was her strategy for letting me know she didn't know how to respond to a particular request. Talking about her drawing helped a little because she tidied it up by turning it into a picture of a quail coming out of the egg. She reluctantly wrote one word.

Beth's drawing with writing. Original 10x20 cm. Pencil and felt pen.

Jan, Robert, Dave and Scott seem to have shifted from allowing the drawing to describe what they saw to focusing on which words to use instead. The drawing was taking a backseat to the writing. It was as if they found doing both tasks just too much and so focused on one; the one they perceived us to value the most. The children were beginning to receive the message that the written word might be more powerful than their drawing. For those, like Beth, whose primary means of communication is drawing this was a very disturbing realization and one she resisted. For the others like Robert and Jan it was a very limiting message. As I watched the children progress through their quail diaries, their responses raised many questions for me about

linking drawing with writing.

Visual Perception

Zaporozhets and Elkonin (1971) noted that at age four to five children dramatically increase their eye movements and at age five to six the eye movements appear to pursue the contour of the object. At age seven the eyes also dart across the object. (Clay, M. 1991, p. 285) When I consider the process of observational drawing with these findings in mind I see that the children in this study do in fact mostly use an outline or contour form for their drawing with a few of them attempting to fill in the details within. One could be led to believe that observational drawing might be a good skill to develop; there would probably be some transfer from drawing into the reading and writing process. Letter symbols are complex outline forms and most children find them quite challenging to copy. Looking at the children's early attempts at writing I am impressed with their ability. Perhaps there has been some transfer. If I were a grade one teacher, and anxious to have all the children reading and writing, I might be only too happy to utilize drawing as a beginning writing skill. The contour drawing of an object would aid the mechanics of printing. However I am a kindergarten teacher and I have grown to value the children's drawings as complete in themselves; messages that require no writing. For me to reduce drawing to a preliminary writing skill would devalue the effort and intent of the artist. It would also underutilize the use of drawing as a much broader and very complex problem testing and solving strategy used extensively by children of this age.

When I more closely analyze the process of reading and writing I find that the skills are not as similar as they might first appear. The visual perception required of a child who is just beginning to look closely at print is a very new, specialized and complex process. Writing looks, and is, very different from drawing. Writing consists of strings of abstract symbols, grouped in clusters with spaces between, which are strung from left to right. These strings of symbols contain messages and it is the task of the writer to include all the details necessary for the reader to decipher what has been written. The reader

has to learn to scan the text quickly for relevant stimuli, identify it and translate it into meaning. There is much visual redundancy for efficient readers. They see in chunks of meaning rather than attending to visual detail. Children have to develop a sequential scanning process that is visually efficient and appropriate for printed text. (Clay. 1991) This is a very different kind of looking and seeing from the strategies used in drawing.

When I look at the children's drawings without writing there is a wealth of information that can often tell me more than if they had written several pages. As a teacher of reading and writing, when my focus is on supporting writing, I am suddenly blind to all the information drawing holds. Just when children are at an age when they are able to move their eyes more systematically around an object and notice and record many tiny details we remove the support for using this skill in familiar and meaningful ways for the child. We ignore their drawing and would rather notice all the attributes of their writing. In education, when we identify a developmental milestone, we tend to want to teach to the milestone. So we isolate it as a skill, we disembed it from the contexts where it might naturally occur, and we have children practice the skill over and over. When a skill is isolated we can do a pre-test and post-test to determine if the child has learned. This allows us to say we have taught the skill. It validates our efforts and upholds our accountability to those outside the context in a way they have become accustomed to. When I control the parameters of children's learning so tightly, I also hold on to the key that would unlock possibilities for them. They become dependent upon me for instruction. Instead of this new developmental milestone opening up more possibilities for children to express ideas through drawing and to extend their thinking and problem solving strategies with tools already familiar to them, we capture it and narrow it down to the service of more traditional education.

Helping Beginning Writers

When I returned to the research on beginning writers I found that the strategies advocated for teachers when helping children with the

mechanics of writing were very similar to some of the strategies I have noticed myself and my colleagues using to help children with their drawing and especially those who were timid and just beginning to draw. Perhaps I dismiss the connection between writing and drawing too prematurely?

Zaporozhets and Elkonin (1971) studied three different methods for teaching young children writing and the effects on the children's performance.

1. Just having a model.

   The experimenter wrote a letter in front of a child and gave them general directions to copy it. More than 50 presentations were required per letter for the average child to achieve mastery under this condition.

   Children gained the skill of writing correctly each letter on which they were trained.

2. A model plus instructions.

   In addition to the above the experimenter indicated all the basic points of the contour and an explanation of the shifts from point to point. The verbal guidance is what psychologists call orienting, focusing attention on significant features and actions. This method reduced the training sessions to 10 per letter on average. Children were able to write unfamiliar letters but whatever they had learned was unstable and sensitive to changes in the surroundings such as a shift from book to blackboard or to lines of different width.

3. Model and directed search.

   The most successful training encouraged the child, independently, to identify supportive points by analyzing the presented model for himself. The average number of training sessions per letter was then reduced to four.

   The children trained in this third method shifted to writing unfamiliar letters in varied settings without much difficulty. (cited in Clay, M. 1991, p282-283.)

   This third model was discussed in a similar way by Bruner (1974)

He also added the suggestion that, 'The child should be encouraged to venture, rewarded for venturing his own acts, and sustained against distraction or premature interferences in carrying them out. The learner needs opportunities to carry out intentions, and to initiate and sustain action'. (cited in Clay, M. 1991. p284)

These models refer specifically to writing. As I review the tapes of the children drawing around the quail, and in other settings, I can see some variations of the above strategies being used. Unlike writing, drawing has no fixed models such as the alphabet against which we can measure success. This should not mean that we do not support children in their efforts to represent their understanding through drawing. If I focus on children's drawing processes rather than aiming to move them to represent a preconceived norm, then I am more able to see what support might be needed.

Helping Beginners With Their Drawing

There are several children just beginning drawing in the class and although it was not my intention to study them at this time I became particularly interested in Dan. He keeps appearing in my video clips. He is one of the youngest children in the class and is still learning how to use many of the materials available to him. His drawing skills are just beginning and he is very timid about trying to draw. I first noticed his interest in drawing when we were working on our sunflower project. Working with Dan and Joe:

Dan, Joe and I were on the floor examining the head of the giant sunflower. I moved some paints, crayons and pencils down beside us on the floor and started to model the process of drawing the sun flower for Dan and Joe. I was conscious that the two brothers did not attend the Centre last year and perhaps hadn't had the opportunity to do much life drawing before. They would probably need a lot of support and talking through the event if it were to be a positive experience for them. As I often do I talked about my intentions. 'I'm going to draw the head of this flower. I want to draw the seeds, how do they look - sort of round dots. What color can I use?' and I match the brush of paint against the flower until I get a good match. I watched what Joe was doing while also

seeming absorbed with my own picture. As he started to place some paint on the paper and the image of a sunflower began to appear I commented on the form I saw and what it meant to me. 'I noticed you have painted some of the leaves around the flower head', 'The color you have chosen is just the same as the one I see there in the leaves'. Joe seemed to respond positively to these comments by extending his intentions and experimenting with other colors he noticed in the leaves. Dan, the younger brother, meantime had been watching and listening to us closely and I could see that he was plucking up the courage to paint. I also sensed that if I were to suggest this or invite him he would turn me down. Suddenly he said, 'I want to paint too', but he made no move to get paper or materials. He could not ask me because the idea was not yet real for him, so I quietly put some paper and the brushes in front of him and pushed the paints so he could reach them. He looked to see which brush his brother was using and chose one the same, then he watched Joe some more before he began to dab green paint on his page in a fairly random fashion. Joe turned to look at Dan's painting and asked him if he was painting a, 'dumb, dumb painting'. I cringed inside and quickly distracted Joe's attention back to his own picture with a comment about what his next plan might be. When Joe's focus had shifted from Dan I was then able to come back and comment on the many greens Dan had used that were like the leaves in front of him. He seemed reassured and put some more green strokes on his paper then announced to us that this was a 'dumb' painting. 'My painting is dumb' he said over again. Joe turned to Tanya who had joined us and confirmed to her that Dan was painting a dumb painting. Tanya went over to see what a dumb painting might look like so I pointed out how well Dan had noticed the many greens in the leaves in front of him. Tanya looked impressed. Joe looked hard at my face as if he understood that I was unhappy about his comments on Dan's paintings then he turned to his painting to add some different greens to his leaves. I commented on the good idea Dan had then Tanya and I had a discussion about the shapes of the leaves Dan had noticed and I felt Dan listening to us. He asked to do another painting. This time he looked hard at the leaves and carefully drew the outline shape of two big leaves. He looked very satisfied with his efforts.

If I return to this event and examine it more closely I find that there are indeed elements of strategies suggested by Zaporozhets and Elkonin (1971) and by Bruner(1974).

When I moved some paints, crayons and pencils down beside us on the floor and started to model the process of drawing the sunflower for Dan and Joe, I was encouraging them to venture into the drawing process as well as providing a visual model for them to follow.

I talked about my intentions while modeling. "I'm going to draw the head of this flower. I want to draw the seeds, how do they look - sort of round dots". Talking aloud makes my thought process more visible and explicit. It enables Dan and Joe to perhaps understand that they too need an intention and what it might be like. I am talking about my own directed search of the visual object. I am giving them clues and language that might be helpful when they come to do their own searching.

When I said, 'What color can I use?' and when I matched the brush of paint against the flower until I got a good match, I let them know there are problems in painting and that I have to analyze each problem and discover the answer for myself. I showed them how I solve a problem.

When I watched what Joe was doing while also seeming absorbed with my own picture. I was allowing him space to venture for himself without being too directive. I was opening an opportunity for him to carry out an intention of his own.

As he started to place some paint on the paper and the image of a sunflower began to appear I commented on the form I saw and what it meant to me. 'I noticed you have painted some of the leaves around the flower head', 'The color you have chosen is just the same as the one I see there in the leaves'. Here I was supporting or rewarding the venturing without being evaluative. I was also giving him the language he might need to analyze his work for himself.

When Joe seemed to respond positively to these comments by extending his intentions and experimenting with other colors he noticed in the leaves it confirms for me that my strategy was successful.

When I had to quickly distract Joe's attention back to his own picture, with a comment about what his next plan might be, I was not only positively redirecting Joe but I was also preventing him from

interfering with and distracting Dan.

When I commented on the many greens Dan had used that were like the leaves in front of him he seemed reassured and placed some more greens on his picture. Here I was again rewarding and supporting Dan in his venturing behavior. By pointing out how well Dan had noticed the many greens in the leaves in front of him I was also letting him know that he had successfully analyzed the sunflower for himself.

As I describe what I did with Dan and Joe in more detail I am aware that they might seem a little passive but it is important to remember that the child is also an active agent in his learning. In order for the child to become as self directed and independent as model three describes I have to take less of a leading role.

Rowland (1987) describes an 'interpretive' model of teaching where he sees the teacher's role as being more that of a reflective agent. This model aims to help the child identify concerns and needs and also to provide positive yet critical feedback to the child. Rowland extends the interpretive notion by encouraging the child in turn to critically respond to the teacher's contribution. Teaching then becomes a process of dialogue, expressing what it is the learner is trying to formulate and grasping those things which the other person is indicating. (in Pollard, A. 1987)

Malaguzzi (1993) describes this dialogue using the metaphor of a ping pong game, 'For the game to continue, the skills of the adult and child need appropriate adjustments which allow the growth through learning of the skills of the child'. (cited in Edwards, C., Gandini, L. and Forman, G. 1993, p 61.)

My interactions with the children remind me of the hermeneutic circle. As we raise, or uncover, our own awareness of the situation through discussion with children so, too, are the children affected by this discourse. Our responses change and in turn affect changes in the children's response to us.

An Artist Helping a Young Accomplished Artist - Wang Yani

I have been looking for ways that a kindergarten teacher might help a reluctant artist. I now want to turn to an artist helping a keen and

competent child and draw out whatever strategies are used that might be relevant to my situation. I have always been impressed with the work of Wang Yani, a young Chinese girl who has exhibited all over the world. Her father is an artist and values and supports Yani's work.

Even Wang Yani's drawings were once scribbles. Her father tells how at age two and a half, after she had been watching him paint many pictures of people, she asked to make a drawing of her father. 'So he sat still on a stool and modeled while she drew him.

'When she was finished, she said to her father, "Does it look like you?" At first her father laughed because the sketch looked like a dozen or more earthworms crawling over a stone. But to please Yani, her father said, "Yes! Yes!" Yani was so encouraged, that though still only two and a half, she sketched everyone she met, from children to older people.' (Zhensun, Z. and Low, A., p23.)

Wang Yani's father was aware of the dangers of overly directing or instructing Yani. Instead he tried to provide opportunities to help her strengthen her understandings of what she saw. He tells how Yani's beginning paintings of trees had no leaves, so he asked a botanist friend of his to explain the function of leaves to Yani and so Yani started to put leaves on her trees. However she also had painted fruit on the tips of the leaves. Next he took her to an orchard so that she could see for herself how the fruit grew on the branches. After that Yani's trees had leaves and fruit that grew on branches.

Yani's father also encouraged her to think independently and to solve problems for herself. So when Yani brought her painting of white hibiscus flowers to her father he asked if the pale gray petals were meant to be white. He raised a challenging point and Yani solved the problem herself by painting the background very dark so that the petals became lighter by contrast. He 'frequently created problems for Yani while she was painting, in order to sharpen her mind and make her more visually sensitive'(Zhen and Low, 1991, p. 47).

Beth

I have an artist in my class. She knows she is an artist. Her drawings flow from her experiences and her thinking with a freedom and

fluency I am envious of. She takes her drawing seriously and knows that it is important to draw regularly. The sketchbook her grandmother gave her is full of drawings of things she has seen and imagined. Her grandmother is a professional artist and Beth visits her studio and exhibitions. She works beside her grandmother in her studio and is shown how to use real artist's materials. I expect that she provides a model for Beth that helps her know what it means to be an artist. Beth's mother, Jill, also studied Fine Art and she can recognize the descriptive qualities in Beth's lines. She supports Beth's drawing at home by freely providing space and a range of materials. More importantly perhaps she also provides and supports drawing opportunities. Jill told me how one day they found an injured bird in the garden. After making sure the bird was comfortable she and Beth took their sketch books out and drew the bird. Jill provides a strong drawing model for Beth, one that lets her know that drawing is important and of value in many everyday situations outside of a studio.

When I visited Beth's house she and her mom brought out a large artist's portfolio which contained carefully selected samples of Beth's drawings. They seemed to have been selected either for their artistic merit or for the significance it held in Beth's life at the time. Beth had used a range of drawing media which included graphite, chalk, oil pastel, felt pen and ball point pen. She had drawn on a wide range of shapes and qualities of paper. Some of the drawings Beth had tossed off by on small scraps of paper; treasures that Jill rescued. There was a sequence of tiny detailed drawings showing the life cycle of a frog. Another showing the metamorphose of a butterfly. The portfolio was arranged chronologically from the time she was eighteen months old. Each drawing had a date and short description on the back. Beth and her mother were keen to show me the drawings and as we looked at each piece both had a story tell. Jill was able to put the drawing into the context of Beth's life and experiences at the time it was done. Beth told me how she had come to make the drawing and what it was she was trying to say or explore through her drawing. I was surprised they both remembered so much about each drawing.

Beth was able to talk to me a little about how she drew and what

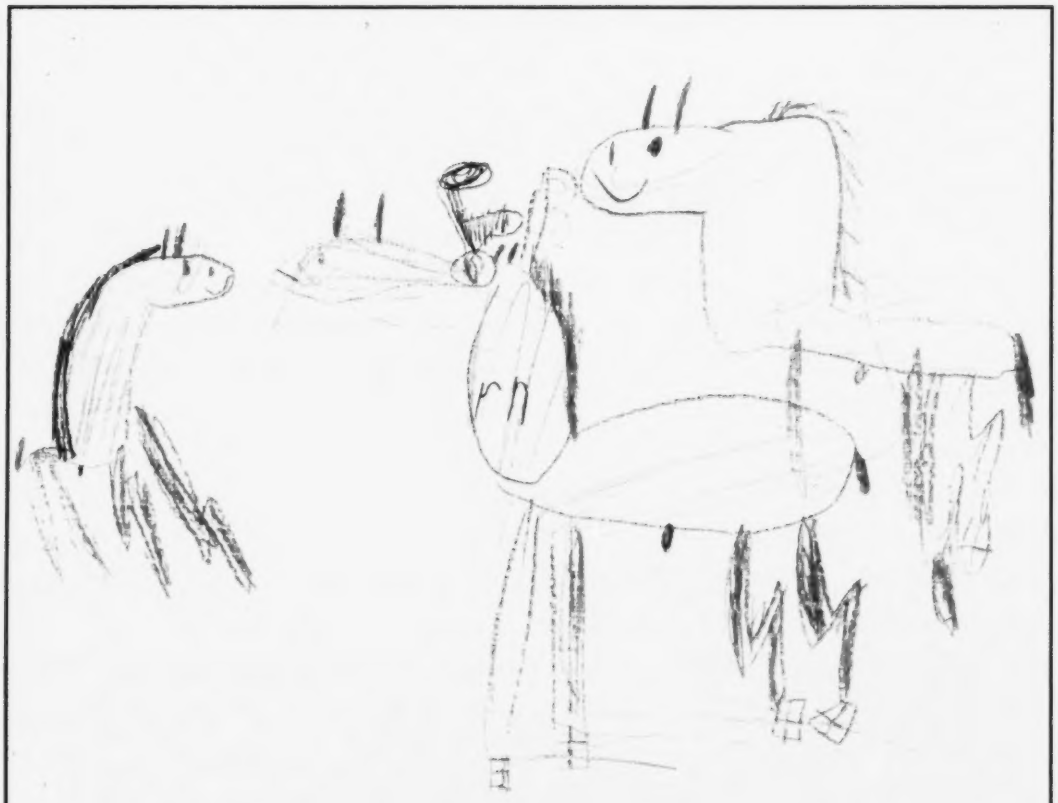
she was thinking about when she drew. I noticed that unlike many children her age she now drew the land and sky meeting on the horizon. I pointed this out to her and asked how she had discovered this. She told me that one day when she had been outside drawing she had noticed that the sky touched the ground because she always looks very hard at what she is drawing. Then, to make sure that what she saw was right, she looked at the sky in Calgary when visiting her Aunt and in the mountains too. When she saw that the sky touched the ground wherever she was then she knew she must be right. I asked Beth whether she needed to talk when she was drawing. She laughed and shook her head, 'No, I have to concentrate. It takes a lot of concentration to draw. I can concentrate for a long time.' She added, 'I think I take a long time to draw because I put a lot into the drawing. I draw fast though because I have a lot to do.'

I talked a little with Beth about the lines she drew to make her pictures. I wanted to know how she chose what kind of line to put down. She talked to me about the lines feeling right. She gave me the example of when she was drawing the quail; 'I was watching how they hopped in the cage and how they were cleaning their feathers with their beaks and I wanted my drawing to look like they were doing these things'. She curled up in a ball on the floor then sat up and told me how she liked to do what she wanted to draw, then the lines worked better for her. Jill confirmed this by telling me how Beth would take her doll in the car and hold it up to the open window to see how the hair looked when it was blowing with the wind. She described too how Beth had been alarmed when the horse she was sitting on had bent down to eat some grass and so now she has started to draw horses with their heads down.

Beth draws a lot of horses just now. During the summer her family went trail riding and it made a big impression on her. Her drawings of horses are alive and I can feel the movement in the lines she has used. Most of Beth's drawings come from her experiences, but there were several that were pure fantasy. These fantasy drawings were like picture stories. They told of imaginary incidents involving a mixture of real and fictional characters. Most of these were done at home when she was quietly playing alone. Some were done on the back of coloring

worksheets she had been given at church or other care settings. It was interesting, and very heartening, to see that she had not persisted long at the coloring task she had been given but had preferred to turn the page over and make her own picture to color. I think Beth sees her drawings as an extension of herself and does not take easily to others interfering with this. I remember an incident when her parents wanted to frame some of her drawings, but Beth did not want them locked away out of reach. Her drawings were a part of her and to see them behind glass upset her.

When Beth started in my class two years ago she found school



Beth's horses. Graphite and pencil crayon. Original 20x28 cm.

quite difficult. She used to be upset quite a lot. It was sometimes impossible for her to communicate what she wanted to her peers and she

would often throw her head back and wail with distress at her lack of interactive skills. We worked intensively with her, giving her the language and strategies she needed to be successful in social interactions and she tried very hard to put them into practice. Things improved slowly for her and in order to give her (and others!) a break from the very tiring social settings she usually chose to work in I used to take her into the art room and sit with her and draw. Her beginning drawing consisted of fairly primitive explorations, but it had a fresh and open approach, a real freedom and spontaneity. The process had a calming effect on her and would keep her engaged for long periods of time. She was happy to try anything new and watched what I and everyone else around the table were doing. I began to notice that her drawing was taking form and she began to create some lovely and powerful drawings and paintings that others also noticed and appreciated.

Now she often carries her sketch book and bag of pencils and crayons around the classroom and is quite set on becoming an artist. She was particularly interested when Tanya, the artist, came and worked with us, she watched her every move very carefully. She learned how to select the view she liked, the medium she wanted to use and the kind of paper that was best for her purpose. When she drew, her mood moved into one of quiet deliberation from which she was not easily distracted. She learned how to set herself challenges and take risks. She evaluates as she goes and will often whip off several interpretations in her search for the best way to represent her ideas. Beth models the attitude of an artist for other children. They know that drawing is one of her gifts and are appreciative and respectful of it. Beth has acquired the language of drawing and she is able talk to other children about their work in ways that acknowledge and confirm their efforts. She knows how to make the right comment, the one that will challenge and the one that can give them space if it is needed. Her close friends have become artists too.

Chapter 5

SYNTHESIZING MY UNDERSTANDING OF CHILDREN'S DRAWING PROCESSES AND HOW MY TEACHING HAS BEEN INFORMED

Each project revealed different aspects of children drawing. As I reflect on each one, my understanding of how I can best facilitate the drawing process takes shape.

The Sunflower Project

Drawing is an activity which children often undertake spontaneously in many contexts both in and out of school. Their drawings will usually refer closely to their life experiences. When drawing was done within the contexts of the classroom, with many other children, there were many different life experiences for me, the teacher, to accommodate. When I found ways to inform myself about these different experiences, and acknowledge the different individual interpretations that were likely to arise from them, then I was more likely to provide drawing experiences in which the children would want to participate. When my invitation to draw was sensitive to how individual children might respond, then the children felt more inclined to accept my invitation.

Drawing happened more fluently after experience and exploration of the subject to be drawn. Discussion, touching, role play, smelling, watching, and reflecting were some of the ways I used to explore the subject. When I allowed the opportunity for these activities before asking children to draw it was more likely that children would bring to the drawing the kinds of experiences necessary for more thoughtful, and perhaps more elaborate, drawing to occur.

My understanding of the drawing process and the value I placed on drawing was reflected in the kinds of spaces and opportunities I created within my classroom and teaching. If I provided a well considered range of authentic drawing tools, easily accessible by the child and invitingly arranged, and in a variety of settings, it allowed more children access to drawing. It encouraged them to consider different drawing spaces

and places. The choices allowed them to select the medium that most appealed to them and the setting they felt most comfortable in. If I provided flexible use of time and opportunities to revisit a subject or medium, then I was setting a climate for exploration where children could be challenged to think of the many ways a medium might be used and a subject represented. Open ended and recurring opportunities to explore particular mediums gave children the time necessary to become familiar and comfortable with one that suited them.

When I invited and accepted the children's many different and personal representations and explorations, I was providing a safe and secure setting that would permit children to take risks and to follow their own ideas through to satisfactory conclusions. The children were more likely to experiment with different media and ideas. The setting, the provision and the invitation reinforced my expectation; that the children would take drawing seriously, and use it to solve a variety of problems in different ways, more explicit for them. When my expectations were clear the children tended to rise to the expectation.

When I considered children's drawings to be representations of an object or subject rather than replicas, I opened up the possibilities for drawing to become a useful language for children; a tool with which they could address a diverse range of learning opportunities. By viewing children's drawings as representations I freed myself from the naive notion that reality could be copied and the notion that perception was like a passive imprint bound by a developmental framework. I opened myself to the awareness that representation required the inventions of representational concepts and forms that would mediate between children's direct experiences and their representations using a particular medium. The movement from perception to representation was not a simple process of replication; a translation had occurred. It was this translation that became the dynamic mental activity that encompassed both the cognitive and affective processes in drawing. It allowed the child to consider multiple solutions to representational problems. It helped move me beyond judging drawings as faithful replicas of objects and to believe in the possibilities that lay outside such narrow expectations.

When I was more concerned with the process of children's drawing then I was more likely to see the representational problems children were struggling with. A review of their products could illuminate my understanding of the passage, or journey, they had undertaken and alert me to the kind of support they might need. However, I was more likely to be able to assist children on their journey if I was prepared to travel alongside them.

If I adopted the role of mentor, or if I viewed the child's drawing process as an apprenticeship, then I traveled beside her yet ahead of her. When I drew beside a child I informed both myself and the child. I informed myself of the complexity of the visual representation she was undertaking and some of the solutions that were available. I saw the child from a different perspective and came to know her/him better. When I worked in a partnership with children they too came to know me and learning became a dialogue. I informed the child that there were many passages I could chose from and was able to model many for her/ him. When I modeled and discussed the options and solutions possible for me I allowed the children the freedom of either making these options and solutions their own or ignoring them. By becoming thoughtfully involved in the drawing activity I informed the child that this was a valued activity in which I was prepared to invest my own time.

When I drew beside children I was better able to see the children in all their complexity. I became more aware of children's learning unfolding and what my role might be if I were to assist them. The shared experience opened up the opportunity for authentic conversations around subjects that were deeply engaging. These conversations allowed me to fulfill my role as one who was able assist children become who they wanted to be.

I would like to continue my research by further examining the most effective ways of helping children with their drawing questions.

The Pond Project

I learned that it was not enough to provide experiences and to hope that, because the children were interested, real learning would occur. When children were left to explore on their own their experiences were

often no more than a superficial overview or a brief visit. Without someone to mediate the experience, to challenge their thinking and help them undertake some meaningful project in relation to their experience, then the experience remained just that and did not become the rich vehicle for learning which it had the potential to become. I found that I had to explore the experience in many different ways with the children and discover the opportunities for learning that would achieve a real depth of understanding that went beyond viewing and subject content.

When I engaged children in a collective experience we could use the advantages of having a common frame of reference within which to explore ideas. When children talked about their own personal experiences in the group then it was easier to engage in a conversation that would enrich the collective understanding. When a child's point of view challenged the other's point of view within a common framework I was able to facilitate real depth in their learning. When children drew around a common experience the representational challenges and solutions had a shared context that allowed the children to participate in a drawing discussion or conversation.

Each child's experience was valid and had to be seen to be relevant. Encouraging children to represent their experiences through drawing allowed them the opportunity to validate their experience for themselves and for an audience. Just as we have different voices and registers in talking and writing so too are there many ways of expressing oneself in drawing. I learned to allow spaces in my teaching expectations for children to find their drawing voices. This meant that I had to be open to accepting what it is they wanted to say to me and how they wanted to say it. I learned that it was not enough to be open and accepting, I also had to let the children know that I saw what they were trying to say. When the children were heard then they were encouraged to speak again and try new ways of communicating. A drawing voice is a powerful tool for children and another way for me to understand and be touched by them.

Even though I knew that young children needed and enjoyed tactile experiences I was unprepared for the amount of touching, moving and feeling I observed around drawing. Drawing is multidimensional; it is

a way to express a feeling, an idea, a thought or experience. If drawing is the expression of both the cognitive and the affective domains in children then I needed to provide for opportunities and experiences in both domains within and around the context of drawing. As an adult who has, in many situations, moved beyond the need to have multisensory experiences, and rely instead on my sensory memory to fill the gaps when I am drawing, I had to remind myself that young children did not necessarily have those memories to refer to.

If I wanted to move children towards more disembedded modes of thinking I discovered that they first need to have a strong base of securely embedded ways of thinking and knowing. Disembedded thinking was more accessible and usable when it was joined with doing. I saw drawing as a medium that would easily and naturally lend itself to this cojoining process. The hand, the eye and the mind came together naturally around a thought. Rather than disembedding a thought for young children and teaching to the concept, I found that if I left the thought within the context it first occurred and helped them look more closely at the thought within that context then they would more easily be able to lift it from the context for themselves. The disembedding process then became one that was controlled by them, yet led by me. When I viewed drawing as a language I then saw the possibility for the externalization of a thought or an idea through a drawing. A drawing gives form, that is visible to others, to an idea or thought. This externalization could be seen to contain similar opportunities as language; as talking about thinking. When the children were able to externalize their thoughts they created possibilities for themselves to stand back from their thinking and consider it in other ways. A drawing allowed children to view their ideas outside of themselves; it moved them beyond the action/reaction mode of being that can often limit the possibilities for unique solutions. Instead the drawing pointed the way to higher levels of thinking. A drawing also allowed me more access to children's thoughts. Drawing as a public representation invited discussion. Learning was of a visual and sensory nature where talking was not necessarily the primary vehicle for discussion.

When I provided the setting and the climate for children to watch

each other draw it made them aware of the possibilities within public representation. It encouraged them to reference their peers and to learn by watching others. When children saw what other children were doing they felt that they too might be able to do what they saw. Watching children draw alongside one another made me increasingly aware of the potential for children to learn through watching others.

Drawing beside children made me aware however that their representational vocabulary was limited. I learned that, like talking and reading, children did not acquire an extended vocabulary without a wide variety of models to observe and help to overcome some of the technical problems involved. The drawing language was based on visual thinking. The children strived to form representational equivalents of three dimensional objects within a two dimensional frame. The rules and techniques for doing this were not immediately obvious to the children. In this study I endeavored to work within the zone of proximal development (Vygotsky 1962) of the children in a visual and representational context so that I might challenge and influence the outcomes of their seeing and representation. As I did this I became aware that the rules children spontaneously developed could be modified by experience, by exposure to other models and points of view, and by the media they used. I discovered that I could challenge the children's spontaneous thinking and move them forward into more interesting, more detailed and sophisticated forms of representation. They became more able to control their drawing because they were more conscious of what they were doing.

The act of drawing held the children within an experience. The process of drawing demanded that they stay and look more closely. Drawing demanded a response to the situation. I found that asking children to draw what they see helped to slow them down and focus their attention. When their attention had been focused, I was able to work with them more easily. Drawing helped children see details they might otherwise have missed. Drawing trained their eye to be more observant. The details within their lived experiences that gave the drawings their richness.

Children's drawings provided a clear indication of what they were

paying attention to. When I reviewed children's drawings as part of the larger schema (Nutbrown, 1994) of their thinking then I was able to see individual patterns of thinking that may have had little to do with the topic or content of the study I had planned in the classroom. As a teacher I was bound to be interested in children's thought processes, however sometimes the weight of the content blinded me to these processes. In this study I found that if I could change my focus from the content of a topic and instead view the topic as a vehicle for facilitating and organizing experiences around children's schemas and thought patterns, then I was more likely to meet and engage children's minds in ways that would help them extend their thinking. When I followed and supported children's schema's it became possible for them to build on previous understandings and discoveries, and there were more connections in their learning.

When I was aware of the context which surrounded children's drawing the drawing held more meaning for me. I discovered that parents were usually not aware of the context of their children's drawings in school and so had a very limited appreciation of them. I discovered I had to find a way of bringing parents to an awareness of the contexts of their children's drawings so that they could better appreciate their efforts and have a deeper understanding of drawing as a representation of their children's thinking.

The children did not always have the language they needed to talk about drawing. Throughout the course of this study I found that it was necessary to model and give the language needed to discuss drawing more fully. When the children were able to talk about their drawing they were able to give both themselves and others a perspective that might otherwise have been missed. Talking about their drawing made children aware of what they had done and what it was possible to do. Talking clarified and crystallized their experiences.

This study looked closely at my understanding within the contexts of my own classroom. It would be interesting to look at different contexts and the understanding of others involved in children's drawing processes.

The Quail Project

Some educators see drawing as being a precursor to writing. In this project I attempted to combine writing with drawing. By putting the two processes together I hoped to see whether there was any overlap for the children I was studying. I thought writing might be an extension of drawing; that it might extend the children's drawings. Knowing that the children were able to discriminate visual details more accurately through their drawing experiences I tried to use this skill in the service of writing without thinking more carefully about the implications this might have for the children.

The children in this study found it difficult to meet the demands of both drawing and writing and tended to focus on either one or the other. It seemed that writing and drawing contained very different meanings for the children and involved very different thought processes.

The process of encouraging the children to write gave them the message that their drawing was no longer important to me. Because the writing was something I valued highly it seemed that the children gave it more value than their drawing. This perceived devaluing of their drawing efforts led many children to abandon drawing as their primary means of communication. For some children, whose primary means of communication was drawing, this was a very distressing situation.

I discovered that when I became a teacher of writing; when my focus was on supporting writing, I suddenly became blind to all the information that the children's drawings held. I found it difficult to support drawing and writing simultaneously. Just when drawing had become an effective learning tool for the children it seemed as if I was asking them to replace it with another more powerful tool; writing.

The implications for combining drawing with writing in this study were limited but interesting. I would like to continue my research in this area.

Becoming a teacher of beginning writers put me in touch with some strategies for helping children that I had forgotten. When I used these strategies for helping children beginning drawing I found them very effective. I was able to encourage children to venture and take risks, to sustain them against distraction and interferences, to help

them carry out their intentions and to initiate and sustain their actions.

It was important for me to remember that children need to be active agents in their own learning. My role was primarily that of providing critical feedback and encouraging them to respond to this in their own critical way. My aim was to create a dialogue with the children around their drawing.

This study uncovered a great deal about children's drawing processes. Drawing can be a very powerful tool for young children. Representing objects and ideas through drawing is a complex and challenging process that requires higher levels of thinking to solve the many interpretive, perceptual and representational problems. Drawing combines the actions of the hand and the mind in purposeful and meaningful ways for children. Watching children draw can provide teachers with a clear indication of some of the individual thought patterns of children. Drawing can provide many opportunities for a dialogue between teacher and child. When teachers are open, accepting and supportive of children's drawing efforts they can give children a powerful and personal voice with which to communicate and become active agents in their own learning.

> 'As visual thoughts in process, most drawings preserve and reveal the private and intimate struggles of artists coming to terms with their subjects at every stage of their careers. Drawings document the complicated process of learning, studying, experimenting, developing, mastering, transforming, and creating.' (Chan. 1995, p. 10)

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